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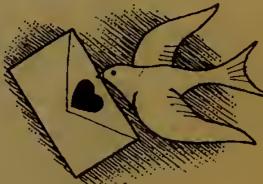
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TROKS P. I. SOITH ALAN WATTS (XNOWED)



AMONG THE SCHOLARS, spiritual leaders and other respected thinkers who have conducted weekend seminars of Heart Haus is Dr. Wolter Houston Clark, professor of psychology of religion at Andaver Newton Theological School, president of the Academy of Religion and Psychical Research and a founder and past president of the Society for the Scientific Study of Religion. In this group ore, left to right, Fronk Potter, Dr. Clork, Martha Horlin and Maurice Ticheau.





Heart Haus Center of Mill Valley invites human potential leaders to write regarding the giving of weekend workshops, seminars and lectures.

The Center does not pay travel expenses, prefering to work with those who are planning cross-country lecture tours, but does provide board, lodging and payment to its leaders. Please address all correspondence to:

Martha Harlin, Heart Haus 968 Greenhill Road Mill Valley, California 94941 (415-383-4859)

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Heart Haus Offers



GOOD CLASSES \

Lecture-Workshop:

Psychic Healing: What Can We Believe?

This lecture-workshop will explore different types of psychic healing such as laying on of bands, distant healing, magnetic healing and psychic surgery. Specified procedures will he discussed that Dr. Krippner witnessed and experienced in Brazil, Czechoslovakia, the Philippines, and with the American Indian Shaman, Rolling Thunder. Various theories of psychic healing will he presented, and the experimental studies will be summarized. Questione will be entertained involving when one should consider going to a psychic healer and how to select one.

Stanley Krippner, Ph.D., is a renowned psychologist and parapsychologist. Paet President of the Association for Humanistic Psychology and Director of the William Menninger Dream Laboratory, he has authored over 250 articles in profsssional journals and edited and written a number of books, including Song of the Siren: A Parapsychological Odyssey. For 20 years he has researched altered states of consciousnees and paranormal phenomena the world over. Presently at Sonoma State Collegs, he is also Program Planning Coordinator of the Humanistic Psychology Instituts, San Francisco. His moet recent book, Realms of Healing, written with Alberto Vilolldo, will he released soon hy Celestial Arts Press.

Lecture April 2. Fri. 7:30 P.M. \$5.00

Workshop April 3. Sat. 10 A.M. - 6 P.M. \$25.00

A Weekend Intensive with Dr. Salvador Roquet

Introduction to theory & practics of psychodelic therapy and spscial techniques evoking altered states of consciousness: this discussion will delineate ideas which will he developed in two sequent Saturday-Sunday workshops and will deal with the approach of a new, wholistic concept in emotional and mental well-being. Open to professionals, paraprofessionals and all aware people.

Lecture - April 9. Fri. 7:30 P.M. - \$5.00

Exposition of psychodelic theory and techniques: Psycho-philosophic preparation for a simulated psychedelic experience: Dr. Roquet, drawing from his many years of study of Shamanic techniques among Mexico's indigenous peoples, will discuss his uniquely effective methods for altering consciousness. Roquet's approach combines Sbamanic methods with Western psychiatric concepts to form a truly transcultural psychotherapy. The role of sensory overload, marathon, ritual and psychoactive plants in this therapy will he explored. Slides depicting procedures discussed and artwork by persons in profoundly altered states of consciousness will he shown.

One day workshop-April 10, Sat. 10 A.M. - 6P.M. - \$25.00

The simulated psychedelic experience: employing everything hut the psychoactive drugs, the marathon will utilize eensory homhardment techniques to evoke an altered state of consciousness. These states or "separate reality" typically facilitate new wholistic ineights, and the smergence of creative symbolism, which sometimes leads to the condition of cosmic sonsciousness. In addition they reveal such psychodynamic processes which frequently hlock actualization of our full potential. Necessary preconditions for and methods of altering helief systems will be presented and facilitated through sensory hombardment techniques employing the use of music, lighting effects and alides, the latter depicting mystical, mythic and sexual symbolism of various cultures.

One day workshop- April 11. Sun. 10 A.M. - 6 P.M. - \$25.00

Dr. Salvador Roquet of the Albert Schweitzer Association in Mexico City, ia renowned in scientific and medical circles as an outstandingly hrilliant pioneer in the field of psychotherapy. While it is suggested that the entire weekend should be experienced for maximal knowledge and effect, each of these events has been so structured as to be complete per ss.

Explorations Into The "Tonal" and The "Nagual."

The accerer's path is the left-hand path of diacovery and incursion into the primordial feminine. The journey to the Nagual, which must his preceded by the "straightening of the island of the Tonal" involves death of the ego and a subsequent transformation where a person "reclaims that which has been loet" and arrives, in a vision, at the Socerer's explanation. Using Castaneda's descriptions of his encounters with the Tonal and the Nagual as a starting place, we will engage in a series of exercises from Shamanic Initiatory traditions which acquaint one personally with the Tonal and the Nagual. Among the techniques we will discuss are: acquiring personal power, the Socerer's way of dreaming, hecoming a warrior, meeting one's allies, assuming responsibility and the actual process of Initiations where symbolic death becomes a visionary experience. Recommended, but not required reading: Tales of Power, C. Castaneda.

Alberto Villoldo, psychologist, is co-author with Stanley Krippner of "The Realms of Healing," and has studied shamanic and spiritual healing techniquee in North and South America. Though formally trained as a psychologist, his interests have centered on
methods of paranormal healing and shaman initiation practices as
a pstential transpersonal psychology.

Lecture: April 23, Fri. 7:30 P.M. \$5.00
Workshop: April 24, Sat. 10-6 \$25

The Transpersonal Self

This workshop offers an opportunity to develop awareness of the transpersonal self through examination of helief systems that limit and shape reality and through the role of intuition in selecting those systems, the role of the will in developing personal potential, and the integration of intuitive right-hrain functions with rational left-brain functione. The concept of a transpersonal self is found in hoth Western psychology and East-srn philosophy. Many personality theories suggest that optimal psychological development includes the capacity for self-transcendence. Jung, Maslow, Assagioli and others have developed comprehensive theoretical frameworks that consider the healthy personality as one including awarenese of a transpersonal self. Experiential exercises guids participants in expanding self-concept, and exploring the areas where dreaming and waking, perception and projection, ordinary and non-ordinary reality meet. Participants consider the practical implications of hecoming who they are and the effects of transpersonal awakening in their lives.

Frances Vaughan Clark, Ph.D., is a clinical psychologiat in private practics. Precident of the Aesociation for Transpersonal Psychology, and Associate Editor of the Journal of Transpersonal Psychology, she has taught at growth centers in the U.B. and Europe. Lecture: April 30, Fri. 7:30 P.M. \$5.00 Workshop: May 1, Sat. 10-6P.M. \$25

A Psychic Weekend With Dr. Milan Ryzl

An introduction to parapsychology and psychic phenomena sesn through the eyss of a scisntist who is humanistically oriented, This workshop will embrace such topics as ESP, hiofeedhack and altered states of consciousness, contemporary advances in ESP research, parapsychology and cyhernetics, and parapeychology in Communist countries.

Workshop - May 8, Sat. - 10-6 P.M. - \$25

ESP and spiritual development is the central theme of this workshop which emphasizes practical exercises in hypnosis and meditation, designed to lead to a conducive psychic state of conscioueness. We will combine the theoretical and esperiential aspects of psi, and will deal with parapsychology as related to religion. Fither or hoth workshops may he taken, as each deals with different aspects of psi, and are complete per se.

Workshop - May 9. Sun. 10 - 6 - \$25

Milan Ryzl, Ph.D, hailed as "creator of psychics" in the best-seller, "Psychic Discoveries Behind the Iron Curtain", was the first scientist to publish scientific data on parapsychology in Communist countries. He holds a doctorate in physics and chemistry, and is internationally renowned. His course in parapsychology at San Diego State college was the lst. course for credit in the West, initiated the growth of parapsychology courses offered at U.S. Universities. He has written 5 hooks on peychic phenomena and 100

The Impact of Psychedelics On Art: Traditionals Modern

As an anthropologist working in the area of psychedelic plants in traditional societies, Dr. de Rios has observed the use of LSD-like substances in healing, witchcraft, religion and divination. This one-day workshop will focus on the impact of such powerful substances hoth in contemporary and so-called primitive societies on the creative process, and particularly, the plastic arts. Slides of non-Western societies and some contemporary American artists whose work has been influenced by psychoactive drugs will he presented.

Marlens Dohkin de Rios is a post-doctoral fellow in the Medical Anthropology Program at UC, San Francisco, where she is researching methods to study the cultural patterns of consciousness. She has conducted field research in the Peruvian Amazon on psychedelic folk healing. Her hook, Visionary Vins chronicles the year's experiencs. Her next hook, The Wildsrness of Mind: Sacrad Plants in Cross-Cultural Perspective will soon he released.

Workshop-May 15, Sat. - 10 A.M. - 6 P.M. -825.00

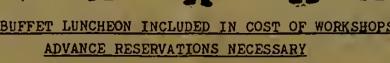


















GOOD TIMES



The Lovemaking Experience

You are invited to sbare a deeply moving and rewarding opportunity to experience the pleasure of love conecioueness unfolding within you. The Lovemaking Experience will meet you where you are sexually and take you on a coneciousness-raising trip to a epace within that you rarely allow into your awarenese. As a result you will experience yourself sexually in a way that is clearer, higher and more powerful than before. You will use this new coneciousnese to break through sexual limitations, and truly communicate with your partner on many levels. By giving yourself permiseion to feel eexual in a safe atmoshere and by linking your energy to a new conscious awarenese of being one with your source, you will connect with the power to transform your consciousness into the experience called love. The Lovemaking Experience will change your life sexually by expanding your consciousness to include the all-beautiful eource of our vital energy, conscious love!

Tom Durkin, M.A., is a licensed marriage and family counsellor specializing in eex therapy since 1973. He is Director of the North Berkeley Counselling Service, and a recent Fisher-Hoffman graduate. Formerly a Roman Catholic priest, married and father of a five year old son, he is no stranger to the search each of us shares for the "Lovemaking Experience".

Workshop - May 22. Sat. 10 A.M. - 6 P.M. - \$25.00

I Ching: Intuitive Process and its Application in Life

Using the <u>I Ching</u> as a focus, we will participate in ways of acknowledging and utilizing the deep sense of knowledge within us. Using the I Ching as a touchstone, we will experience more clearly the act of eeeing life choices, taking responsibility for right action in our daily practice. We will learn specifically of the I Ching as a eecond language of the unconecious, through inner imagery, painting, and relationship within and with our lives. Acquaintance with I Ching belpful, not necessary.

Dominie Cappadonna, a Pb.D. candidate, hae had ten years in counselling, training in Gestalt Art, Jungian studies, Eastern philosophy and research on the I Ching.

Workshop - June 5. Sat. 10 A.M. - 6 P.M. - \$25.00

3-Day Sahaj Yoga Seminar/Workshop

"Recent Discoveries in Energy Yoga" will be the introductory topic to a two day intensive Sabaj Yoga workshop led by Yogeshwar Muni (Charles Berner).

Lecture-June 11 Fri. - 7:30 P.M. - \$5.00

Saturday Sahaj Yoga Workshop

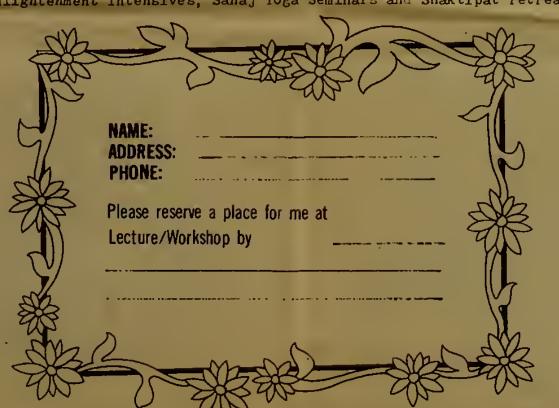
Opening discussion on the peychology of spiritual surrender and Sahaj Yoga'e role in growth - Experimental group chanting, interspersed with short talks about "bhakti" (devotion). Exploring and experiencing the concept of "Shakti" (divine energy). Theory and practice of the various steps of yoga, culminated by group chant.

Sunday Sahaj Yoga Workshop

Exploration of the ancient psycho-physical techniques of "Kund-alini" - Group chant - Discussion on willful practices - The esoteric meaning of love and divine energy, and receptivity of same. Discussion on qualifications and the two Paths - Chanting.

Sat. & Sun. . Workshops, June 12-13, 10-6 P.M. \$25

Yogeshwar Muni (Cbarles Berner) - Formally trained as a physicist, he worked for the National Bureau of Standards for 11 years, and did research and training in human communication and ability development. He founded and directed the Institute of Ability from 1965 - 1972, and is presently director of the Sanatana Dharma Foundation to administer the teaching of Sanatana Dharma (Eternal Way) to the West. Re regularly holds satsang, scripture classes, lectures, Enlightenment Intensives, Sahaj Yoga Seminars and Shaktipat retreats.



Intuition and Sychronicity

The content of this workshop consists of experiential exercises deeigned to expand consciousness and to reach that center of objective awareness within from which we can know and work on ourselves from a new perepective. It will include meditation exercises, hypnosis; guided imagery and fantaey, dream work, and actual practice at "tuning in" to specific problems of group members by using the faculty of intuition. We will be encouraged to apply this new awareness into our own lives.

Mary Jane Ledyard, Ph.D., ie a clinical psychologiet in private practice with advanced training in clinical hypnosie, Reichian therapy, psychosynthesis, and Jin Shin Jyutau (an ancient oriental healing art similar to acupressure). She hae presented papers at national and international conferences, and conducted seminare in the U.S. She is a faculty member of Chapman College, and the field faculty of the Humanistic Psychology Inatitute.

One day workshop-June 19, Sat: 10-6 P.M. \$25

Dimensional Speed Reading

Are you reading as well and fast as you should? Do you have to re-read to comprehend well? Do you get bored easily and quickly forget what you read? Would you like to expand your vocabulary? Would you like to read more, but can't seem to find time? If your answer to any or all of the above questione is "yes", then Dimensional Speed Reading can help YOU. It is a simple method anyone can learn with eelf-application by using these proven techniquee after completing this brief but inteneive and dynamic course in reading proficiency. Dimeneional Speed Reading can triple your present reading rate, improve retention and comprebension, increase vocabulary and assist you in organization of reading and writing materials. You will develop better study babits ae a result. This course has been given succeesfully in business, inductry, and individuals intent on career advancement or etudy. The curriculum is of a broad, general and enjoyable nature.

Joyce Turley, M.A., is a leading innovator in the reading efficiency field with a 25 year teaching background. She bolds degrees from Penn State and University of Oklahoma. She is active in sports and has trained Billy Jean King in her techniques, in addition to directing two international tennie tournaments. Recently she has been conducting a etudy comparing eye-mind-hand co-ordination skills in sports to more effective reading habits. She has taught thousands of businessmen, students, and the general public through national programs to improve and enjoy the art of reading.

2 Day Workshop, June 26-27, Sat-Sun. 10-5 P.M. \$60

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Dr. Gardner Murphy Award Fund

Heart Haue would like to ask all who are becoming more aware of the possible potential horrors of being incarcerated in the impersonal environs of the average hospital, to contribute to the Gardner Murphy Award Fund.

It has been brought to our attention by Dr. Lois Murphy that her husband, the world-renowned psychologiet-parapsychologist, Dr. Gardner Murphy, has been subjected to unnecessary careless and inhumane "treatment", resulting in severe psycho-physiological trauma, following his stay at two hoepitals.

Dr. Murphy, whose Parkinsonian symptoms complicated by a broken hip, was hospitalized, underwent an operation which resulted in heart failure. Susequently an emergency gasteroetomy and tracheotomy were performed, reculting in endless painful experiencee, and finally acute brain syndrome, following a series of valuem shots. According to Lois Murphy, "Medicare, Blue Cross, and Blue Shield pressurize hospitals to get people out as fast as possible", and one advisory committee recommended a nureing

Fortunately the Murpbye have had recourse to some humanistically oriented doctors, who recognize all the dynamics of hie delicate condition, and have insisted on "bome-hospital" care as a requisite for his eurvival.

Those who know and love Dr. Murphy and have been influenced by his prolific and brilliant contributions in the fields of psychology and parapsychology, will be glad to know that he is gradually recuperating due to the constant, loving care given him by his wife and a 24 hour nurse. The doctors say that he would have not survived without this type of home care. He is now alert, holds conferences with colleagues on prospective books and seminars, and enjoys classical music with his family. This kind of care however, is very costly.

The Gardner Murphy Award Fund was begun by Helen Lynd, and we were apprised at Heart Haus by Dr. Stanley Krippner, Dr. Murphy's long time dear friend and colleague. The fund was established to defray the exorbitant cost of a "home-hospital", and to enable Dr. Murphy to remain in a world which he has improved a great deal, for as long as his destiny decrees. To those of you who would enjoy participating in a tiny part of that great destiny, and who feel that this is a wise and bumanistic alternative to deal with the hazardous health condition of Gardner Murphy, please send your contribution (tax deductible), no matter how small, to:

Dr. Gardner Murphy Award Fund

c/o Heart Haus

948 Greenhill Road

Mill Valley, Ca. 94941



GARDNI R MURPHY was Director of Research at the Menninger Foundation for 15 years and is now a Professor of Psychology at George Washington University. He was one of the first senior American psychologists to give serious attention to parapsychology. He has served as president of both the American Psychological Association and the Society for Psychical Research, and was given the APA's Gold Medal Award in 1973. Among his major books are. Personality. A Biosocial Approach, and Human Potentialities.

Gentle Jim (A Eulogy)

Shakti Martha Harlin

Gentle Jim, the joyful man Flown to earth by Nature's Plan Just to tarry for a wbile to help us tread the cosmic mile

Lives were re-arranged by bim (say they who knew my Gentle Jim) Hearts with overkill of etrife would flow with overfill of Life!

Townsmen, Family, Hippies, All heard his loving clarion call Whosoever eought to roam Found Gentle Jim's a welcome home

So if you chance to pass his way by dark of night or light of day Please stop and say a prayer for him and breathe my love to Gentle Jim

All ways, Always O Gentle Jim!

Workshop Scholarships at Heart Haus

Heart Haus offers work-workehop exchanges. If you are interested in attending our workshops in exchange for a weekend of work, please contact us and advise us of your special skills, talents and expertise in any field. We are precently interested in locating good carpenters, construction people to help add on a dormitory wing. Call or write:

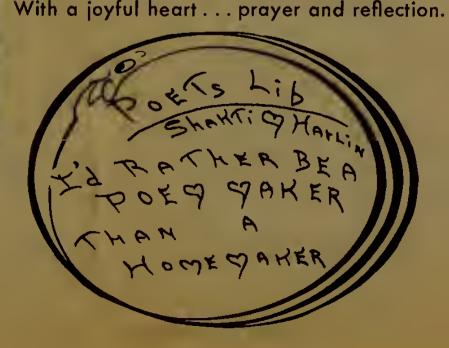
Heart Haus 968 Greenhill Road Mill Valley, CA.94941 Tel: (414) 383-4859 Stanley Krippner

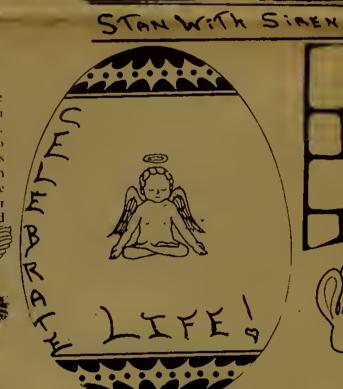
Song of the siren

A parapsychological odyssey

No haunted houses or bloody apparitions frequent this scientific history of parapsychology, only the first rays of light in the dark countries of the mind. The last 20 years of research into psi appear here hy the only person who could have written about them. Krippner, among the earliest scientists in the field, traces the dramatic story of the search for truth, from the first tentative probes to his own work at the world-famous Maimonides Dream Laboratory into the effects of various states of consciousness on psi. He writes of the struggle against the bias of established scientists, early experiments with hypnosis, the convulsive effects of the 60s' drug scene (especially LSD) on the field, and the growing acceptance of psi research.

Let's celebrate Easter, Christ's resurrection,





A Paragosa ludo, je il Odrawa

Stanley Krappiner



Three psychic lectures set at Heart Haus

A series of three programs on psychic subjects will be given at Heart Haus, 968 Greenhill Road, Mill Valley, beginning with a lecture at 7:30 p.m. Friday (Aug. 8) by Dr. Stanley Krippner of New York City.

The "Spectrum Unlimited" offerings at Heart Haus, a newly established center focusing on parapsy-chology and transpersonal chology and transpersonal psychology, will continue with a day long workshop on Extra Sensory perception conducted by Dr. Milan Ryzl, former research associate for the Parapsychology Laboratory at Duke University in Durham, N.C., and Martha Shakti Harlin, psychic research expert and founder of Heart Haus. The workshop will begin at 10 a.m. and continue until 6 p.m. Aug. 16. The \$30 registration fee includes luncheon.

Dr. Rama Krishna Rao, chairman of the psychology and parapsychology departments at Andhra University, India will present a two day seminar on psychic phenomena from 7 to 10 p.m. Aug. 18, and from 10 a.m. to 6 p.m. Aug. 19. The combined day and night seminars, emphasing philosophic and psychological findings of Eastern and Western cultures, require a registration fee of \$35.

A fee of \$3.00 for those registering in advance and \$3.75 at the door is being asked for Dr. Krippner's opening lecture.

Ms. Harlin, with the assistance of Maurice Quirk, a former Trappist monk, established Heart Haus this summer. She has been associated with the American Society for Psychic Research and the Maimondes Dream Laboratory in New York City and has conducted conferences at the Esalen Institute in Big Sur.

Dec. 11, 1975 & S. J. Examiner LECTURE AND WORKSHOP WIWINE
at 968 Greenhill Rd. Mill Valley.

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a lecture.

Aspects of Mysticism, a wine
and workshop.
Aspects of Mysticism, a wine
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pm., reception, to 6 p.m., will
cheese reception, the Counter,
saturday, "Religion, the Experience."
De on and Ecstatic Experience. LECTURE AND WORKSHOP WIWINE be on and Ecstatic Experience and Ecstatic are asked Saturday participants are asked to Saturday participants are asked to a take a one-page account ecstasy, personal experience of ecstasy, personal experience of ecstasy. mysticism or religion. For details,

Author-philosopher to speak at Heart Haus workshops

Joseph Chilton Pearce, former New Yorker now living in Ojai, author of "The Crack in the Cosmic Egg' and "Exploring the Cosmic Egg," will give a lecture and two workshops as a part of the Spectrum Unlimited

series presented at Heart Haus in Mill Valley, this weekend.

Pearce, a teacher, theologian and philsopher, will lecture tomorrow at 7:30 p.m., followed by a wine and cheese reception.

Workshops on "The Magi-cal Child" will be given from 10 a.m. to 5 p.m. Saturday (Nov. 8), and "The Cosmic Egg" from 10 a.m. to 5 p.m. Sunday (Nov. 9).

"The Magical Child" approaches child development from a natural and genetic view, opposing "the intent of nature to the intentions of culture." "The Cosmic Egg" workshop explores the

nature and intention of human life, and the relationship of man and planet.

Heart Haus is a center focusing on parapsychology and transpersonal psychology. It was established six months ago by Martha Shakti Harlin, psychic research expert, with the assistance of Maurice Quirk, a former Trappist monk.

A fee of \$10 is being asked for the Friday evening lecture, and \$35 per person is asked for each of the day long workshops. This includes luncheon and an opportunity for participants to receive counseling regarding their own lives.



Center: Heart Haus

Heart Haus, a new center located in Mill Valley. California, plans to present three programs during October and November. The precise dates have not been confirmed at this time. Prospective participants are requested to write or phone for further details.

The programs will feature Salvador Roquet of the Instituto de Psycosinthesis in Mexico City, who will present the multisensory bombardment methods with which he has obtained such amazing and rapid results in the quickening of higher consciousness. Roquet who, in the words of Walter Clark, is "one of the world's most gifted psychiatrists,", employs Western theories and techniques with the wisdom of Mexican Indian Shamans with whom he enjoys a rapport. Roquet's appearance at Heart Haus will afford a unique opportunity to people interested in learning his techniques and will be his only appearance in the Bay Area.

Ryzl and Buryl Payne in a combined workshop,
Ryzl and Buryl Payne in a combined workshop,
Harry Seagal of the Integrated Therapy Institute in
Harry Seagal of the Integrated Therapy Institute in
thored several and has aupublications The other Heart Haus programs will present Milan science with such tools as hypnosis, biofeedback and grounding techniques from bioenergetics and polarity

Harry Seagal's program is called Encounter Workshop on ESP and will cover theory, experience and develop-

All human potential workshop leaders are invited to contact Heart Haus and advise us of your area of activities and as to when we could negotiate weekend programs at Heart Haus. For further information phone or write Heart Haus, 968 Greenhill Road, Mill Valley, California 94941; 415-383-4859. Δ

Heart Haus to present lecture

The relationship of psy. chology, religion and mysticism will be explored by Dr. Walter Houston Clark at Heart Haus Center in Mill Valley next weekend.

Dr. Clark will give a lec. ture beginning at 7:30 p.m. ture beginning at 7.30 p.m.

Friday and a workshop
from 10 a.m. to 6 p.m.
Salurday. A fee of \$10 is
and \$30 for the workshop.

The programs are a part of the Spectrum Unlimited Series sponsored by Heart Haus, which was founded by Martha Harlin and Maurice Quirk to focus on parapsychology and transpersonal psychology.

Ph.D degree from Harvard and is professor of the Psy. chology of Religion at Andover Newton Theological School in Newton, Mass. He has done research with psy. chedelic drugs and has auDear Tim,

WELCOME! Just in case we don't have a chance to chat, I'd like to relay to you how wonderful it was to have the opportunity to put our signatures on the last and successful petition gotten up by Bob Wilson...I'm sure no one at the original declaration signing felt more motivated!

We were bringing Salvador Roquet with us, but he called and said he was to be in Central America until arriving next week to do our Heart Haus workshop. However, Bob will attend that, and perhaps a later meeting can be arranged.

You may not remember me (we met years ago in N.Y.C., when I was involved in parapsychology research at Maimonides Med. Center with Stan Krippner and you were up to a lot of other things), but if you still have the AHP newsletter devoted to a eulogy of YOU by Walter Clark, a dear friend of ours,...you will notice I did the same for him in that issue.

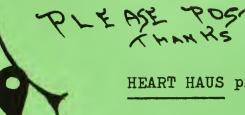
Walter has been here to give workshops and other things on a number of occassions, and we have spoken about you always. You certainly did have a "warrior" in Walter and his unswerving loyalty. We hope you will be able to come to Heart Haus sometime in the near future. Enclosed is a past program, which will give you an idea of what we are up to...eclectic approaches to the ONE...also, the symbol of Heart Haus, which I would like you to have.

Much love and success in your new Life,

Martha & Maurice

Heart Haus

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HEART HAUS presents in its ongoing series.....

SPECTRUM UNLIMITED

A SPECIAL WEEKEND WITH DR. SALVADOR ROQUET

Dr. Salvador Roquet, ground-breaking pioneer in the use of Shamanic practices and psycho-active plants in psychotherapy, and head of the Albert Schweitzer Association in Mexico City, will present a Friday evening lecture and subsequent Saturday workshop on the development of an excitingly new and wholistic approach to emotional and mental well-being.

Dr. Roquet developed his uniquely effective techniques after years of carefully studying and participating in the Shamanic rites and ceremonies of Mexico's indigenous peoples. Psychosynthesis, Roquet's name for his approach (unrelated to Roberto Assiagoli's Psychosynthesis), combines Shamanic disciplines with orthodox Western models of psychiatry into a truly transcultural psychotherapy. The judiciously employed role of sensory bombardment, marathon, ritual, and psychoactive plants in this highly successful therapy will be fully explored. Parallels with Western scientific thought and the philosophical concepts of Mexico's Indians as depicted in Carlos Castaneda's four books about Don Juan, the Yaqui sorcerer, will be discussed. While the workshop will be of special interest to professionals and paraprofessionals, it is open to and has much to offer the humanist-ically and transpersonally oriented layman. Dr. Roquet will deal with the therapeutic potential and practical application of sensory overload and group demand characteristics in psychotherapy. Necessary preconditions for and methods of altering or modifying belief systems will be presented. Rare slides and films, accompanied by Shamanic ceremonial and ritual chants will be used to depict the esoteric procedures discussed. Illustrations of people in profoundly altered states of consciousness, and the highly refined, primitive and symbolic art evolved as a result of those states will also be shown. The essential meaning and value of mystical and transpersonal experiences at the heart of human nature changing personality at its core will be topics for in depth exploration by this most brilliant and sensitive psychiatric pioneer. Dr. Roquet will be ably assisted by his long time friend and associate, the gifted artist, Fred de Keijer.

According to Drs.'Stanley Krippner, Walter Clark, Harvey Cox, and others familiar with his amazing methods, "Dr. Roquet is the outstanding pioneer of our time in his particular field of therapy."

Dr. Roquet's appearance at Heart Haus will be the only one in Marin County on his world tour, and will be given on the following dates.

LECTURE FOLLOWED BY WINE AND CHEESE RECEPTION FRIDAY, AUGUST 20, 7 P.M. thru....?

COST \$10.00

SIMULATED PSYCHEDELIC WORKSHOP SATURDAY, AUGUST 21, 10-5 P.M.

COST \$30.00

Make checks payable to:

HEART HAUS CENTER
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England Doesn

Sex-Scar

Asheville, N.C.

Joyce McKinney, the honeyblonde former beauty queen who was the center of a headlinegrabbing sex story in Great Britain, entered a courtroom giggling and smiling yesterday but left nearly in tears after she was ordered to undergo phychiatric testing.

McKinney, who was accused by a Mormon missionary of shackling him to a bed with fur-lined manacles and forcing him to have sex with her in an English cottage, was in court for a bond hearing on federal charges that she used a false name to obtain a passport.

Sir Thomas Hetherington, British Director of Public Prosecutions, said in London that there would be no attempt to extradite McKinney to England to face charges there.

McKinney, a 28-year-old native ery County, N.C., was a

Pope's Guard Locks Up A Reporter

Vatican City

Vatican journalists expressed indignation last night after a colleague was locked in a bathroom by a Vatican security guard.

Spanish television reporter Paloma Gomez Borrero, who has been accredited to the Vatican as a reporter for many years and who was carrying her credentials with her, said the plainclothes guard locked her up after she refused his orders to climb a ladder onto a nearby television stand.

Gomez Borrero was shut in a lavatory on the side of St. Peter's Square while Pope John Paul II was driven past on his way to a weekly general audience.

She said she refused to climb the ladder because she did not like heights and was wearing a skirt and did not want to make a public display in front of the 25,000 pilgrims waiting in the square.

Journalists who work at the Vatican have frequently complained about the heavy-handed behavior of Vatican security guards.

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Patty's Secret — She Trains Beagles

Patricia Hearst Shaw, former federal prisoner, has been a beagle trainer for several weeks in San Carlos, working on what her boss called a "secret project" that will "revolutionize" the flop-eared canine's image.

"She has a terrific rapport with the dogs," Bob Outman, owner of the Prion Animal institute, said yesterday.

The institute, he said, is involved in training and selling dogs and studying all aspects of dog life.

Outman said the newspaper heiress started July 1 and works odd hours, receiving the pay of an "intern animal trainer."

Outman refused to say what the secret beagle project is.

"Let me tell you, it's a million-dollar idea I thought of a year and a half ago," he disclosed. "Bigger than guide dogs. Bigger than police dogs. This is a consumer idea, and everyone — including you — will want one of our beagles."

Outman said the current crop of beagles began training as nine-week-old puppies and will graduate fully trained as 6-month-old dogs in about a month.

Hearst is working with dogs now in their third week of training.

Outman said he first met Hearst in 1977, when she was free on bail pending appeal of her conviction for bank robbery. Hearst's father, Randolph, had called Outman and asked him to train a guard dog for his daughter.

RG&E Can Raise Rate



Honeymoons Return to China

Beijing

Honeymoons, denounced during the Cultural Revolution as a "bourgeois way of life," have made a comeback in China, with the lakeside resort of Hangzhou being one of the most popular choices for the country's newlyweds.

The New China News Agency said yesterday that Hang-zhou has several hotels catering to honeymoon couples.

"These hotels have specially furnished rooms decorated

with flowers and red papercuts of the 'double happiness' sign," and since this spring, 1400 people have honeymooned there, it said.

It quoted a newly married policeman as saying: "Before we came, we were prepared for the worst, such as having to sleep separately in rooms for single men and women.

"We are so surprised to find special service for honeymooners."

Reuters

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Joyce Mckinney waved to reporters as she and co-defendant Joseph May entered federal court

day, as Jimmy Carter acknowledges, the country faces recession, popular distrust of big corporations and the existence of a sizable underclass. And still most Americans can imagine no more radical cures than those of a 19th century liberal like Ralph Nader, who wants to make the system work by correcting its flagrant abuses. Moreover, in the left-wing view, the turbulent '60s and the Great Society debacle have left Americans fearful of any threat to political stability and distrustful of Government.

TIME, AUGUST 6, 1979

altical

Potential dynamite detector?

experimental evidence that something quite extraordinary happened then," says Physics Nobel Laureate Luis Alvarez, who gave his son a helping hand. A supernova that could have wiped out the dinosaurs? "A very small probability," says

Alvarez *père*. Also possible but improbable: a cloud of interstellar gas or a large meteorite. On with the parlor game.

Sniffing Gerbil

A rodent for bombs

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Photo by Steve Castro

"Volunteer" Joins Search For Victims

victim of Army drug experimentation recounted his two months at Edgewood Arsenal in Maryland to help initiate a campaign by the American Citizens for Honesty in Government (ACHG) to find some of those exposed to an Army Chemical called "BZ".

Introduced by ACHG spokesman, Steve Young,

who characterized the Army's 30 years of drug experiments as being worse than crimes for which Nazi doctors were hung at Nuremburg, "Richard" stated he had volunteered for the program under the belief that he was to test weapons rather than weapons testing him.

"We heard about infra-red and sniper scopes

and all sorts of equipment that was exciting in 1967," Richard stated. "We never knew it was for drugs to be experimented on us as human guinea pigs."

Working today as a Los Angeles executive, Richard asked that his last name not be used.

—please turn to back page

mpic events, which cost anywhere from \$3 to \$38, are extra.

After covering the first week of Spartakiad in Moscow, TIME Sports Editor B.J. Phillips offered some survival tips for Olympic travelers:

"The sports facilities are impressive, the amenities anything but. Toilets are few, far between and largely unsanitary. Every mother's advice has never been more apropos: 'Go to the bathroom before you leave.' Bring a seat cushion—most of the stands are bleacher-style seating—and a pair of powerful binoculars to use in the immense stadiums. If possible, take taxis, buses and subways. Don't drive yourself: street signs are almost all in Russian and left turns are illegal in Moscow. Above all, be patient."

hile Westerners fretted about language difficulties and transportation, Soviet officialdom worried about sinister influences. The Moscow City Communication of the communication

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Little Green Monsters Threatening Wildlife

monsters with claws are escaping from science labs and fleeing to California ponds and rivers where they eat anything they can swallow or tear apart, joining a list of problems officials have blamed on Proposition 13.

Thousands, maybe millions, of 5-inch African clawed frogs are threatening to wipe out wildlife - including some endangered species in at least five California counties, state Department of Fish and Game spokesman James St. Amant said Thursday.

Although the tadpoles are vulnerable, the mature frogs have no known natural enemies here because they taste bad, he added.

"We tried feeding them to large-mouth bass, but the bass spit them out because the frogs taste so bad," he said. "We even tried them out on alligators, and the alligators spit them out,

"I doubt if we'll ever be able to get rid of them," he said. "We're losing ground because of the Proposition 13 cutbacks.

The Proposition 13 budget cuts, St. Amant said, mean his staff has been unable to spend time emptying dozens of wire nets used to trap the greenish-brown frogs in ponds. The traps had been collecting up to 20 clawed frogs apiece and required daily checks.

George McCammon, who administers the department's invertebrate section, said no funds were cut in the agency. He said, however, that Gov. Edmund Brown Jr. ordered a hiring freeze immediately after the November passage of Proposition 13, which limited the amount of money local governments could collect in property taxes. Brown also cut back state spending in keeping with the spirit of the vote.

The trap-emptying job is done mostly by

LOS ANGELES (AP) - Little green temporary employees who include students and seasonals. But until last month when the freeze on seasonals and temporaries was lifted, they couldn't be hired even if the agency had the money, McCammon said.

> It was not immediately clear what impact lifting the freeze would have on the situation.

> The frogs, brought to this country after World War II for use in pregnancy tests, could become a threat elsewhere. St. Amant said.

> "They eat anything they can swallow or tear apart with their claws - native fish, frogs, toads - even bullfrog eggs," he said. "They're like garbage disposals.

> Scientists at one time injected female frogs with women's urine to see if the frogs would lav eggs, indicating that the women were pregnant, St. Amant said.

When scientists found that African clawed frogs were no more useful in such testing than native frogs, the aquatic animals were sold for a short time in pet shops. St. Amant said it is now illegal to keep clawed frogs as pets in California and most other western states.

They currently are used for scientific experiments, and often escape from labs by climbing out of their tanks and hop-footing it to the nearest pond or river, officials said.

The clawed frogs, which live an average of at least four years, proliferate quickly and prey on such endangered species as the unarmored three-spined stickleback fish, a native of the Santa Clara River in Los Angeles County, officials said. In addition to Los Angeles County, the frogs are a problem in Orange, Riverside, San Diego and Yolo counties.

St. Amant said he discovered the clawed frogs in 1969, while searching an Orange County pond for Japanese loach fish.

No Rewards In Busnapping

MADERA (AP) — Claims Chowchilla busnapping state reward have though a

ward for the arrests and con- for 17 hours. victions of the kidnappers the day after the 26 elementary school children and their bus Frederick Woods, one after w driver escap thorities the

The governor offered a re- in which they had been confined

The van was traced to convicted and ductions.

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The Marrying Kinu

The men of Kenya were worried: a new government bill threatened to restrict their right to marry as many wives as they could afford. Though polygamy would remain legal, according to legislation that was debated in Nairobi's Parliament last week, a man would be required to get permission from his first wife before marrying a second one. In addition, the new bill would make wife beating a crime.

Attorney General Charles Njonjo, who drafted the bill, is personally opposed to polygamy on the ground that it is "a luxury and too expensive." His compromise marriage law was designed to be more acceptable to Kenya's parliamentarians, the majority of whom are polygamists. Even so, many of them had serious reservations. Kimunai arap Soi, an M.P. representing one of the Ka-

lenjin tribal areas. charged that the bill would make it impossible to teach wives "manners" by beating them. "Even slapping your wife would be out," he fumed. He was eloquently supported by another male member, Wafula Wabuge, who said that African women loved their men more when they were slapped, "for then the wives call you darling." Grace Onyango, one of four women in the 170-member assembly, ventured to point out that sometimes a mere "slap" could break a wife's jaw.

Arguing that the proposed legislation was "very un-African," Arap Soi warned that "we are moving too far, too fast in Kenya." He need not have worried: Parliament by an overwhelming majority, shelved the bill for six months. For the time being, therefore, Kenyans may continue to slap as many wives as they can afford.

"Volunteer Drug

–from page 1

"Looking back, I'm sure there are many others who are reluctant to talk about it. But perhaps if there were more that could step forward and reconstruct the collective consciousness of Edgewood, Americans would understand what happened and we could keep it from happening again.

Young pointed out that not one official has ever been indicted for the human experimentation program extending over the past 30 years. Young hit the discriminatory non-prosecution of federal officials saying that, "Documentation now abounds that could convict dozens of officials for crimes no different than those for which Nazis were hung at Nuremburg."

Richard commented that he was one of the extremely lucky ones. "The Edgewood programs are a Catch-22 to investigate," he said. "It is not easy to remember even what happened. We were exposed to drugs and chemicals that threw us onto the brink of insanity and those who suffered the most may completely be incapable of responding to



this call.

The Los Angeles executive said he underwent several tests at the Maryland center in 1967 ranging from heing exposed to a chemical in a field that had been, sprayed two months before yet was still powerful enough to send him running in fear, to a erased hallucenogenic that completely memory of what happened. "We were put into a gymnasium that was a massive padded cell," he described. "The floors and walls were padded and four of us were injected with something that took instantaneous effect. Before 1 forgot what happened the next day, I remember one man running around the gym tearing his clothes off. What I experienced was beyond words and something I would never wish on anyone.

Young said the ACHG is concentrating on a search for those who had been given a drug known as "BZ" that has been described as ten times more powerful than LSD with effects lasting up to 80 hours. The drug is currently stockpiled in aerial bombs in the Pine Bluff Arsenal in Arkansas. Over 2,000 men were given the drug but no followup studies had been done to determine the long range

effects of the hallucinogenic.

ACHG has already found Edgewood participants in Los Angeles, Detroit, and Washington, D.C. . . . in the last few days. "We hope each of them will be able to lead us to others,' Young said. The ACHG is going to offer medical examinations to those coming forward to determine if there have been lasting effects. "We have found a pattern of partial amnesia thus far," he stated. "But it will take a thorough examination to determine what else may have happened."

A musician in Washington D.C. told the ACHG he has been unable to remember lyrics since

undergoing testing in 1961.

Young stated the ACHG will be offering legal assistance for a possible class action suit on behalf of the human experimentation victims while seeking criminal prosecution of federal officials responsible.

The ACHG has been exposing federal "mind control" programs by obtaining documentation under the Freedom, of Information Act that revealed the extent of the top secret program that was initiated 30 years ago and which was funded heavily by the intelligence agencies to dominate human behavior. The Army reportedly ceased its experimentation

in 1975 after close cooperation with the CIA's program code-named "MK-ULTRA". Anyone having been tested on at Edgewood

Arsenal, Maryland between 1950-1075 is asked to contact ACHG, 414 Mason, Room 501, San Francisco, Calif. 94102 or call (415) 391-2436.





LT. UHURA OF 'STAR TREK' RECRUITS FOR LIFE IN SPACE

From 1966 to 1969 actress Nichelle Nichols explored intergalactic space as Lieutenant Uhura, the sexy communications officer aboard the starship *Enterprise* (and she's still floating around out there on *Star Trek* reruns).

Today she is the sweetheart not just of Trekkies but of real astronauts and their bosses at NASA for her part in popularizing the upcoming space shuttle. It will be put into orbit in the spring of 1979. Until Nichols signed on to help recruit crew members for the shuttle last February, NASA had received only 1,500 applicants for the 30 jobs available-15 pilots and 15 scientists and engineers. The agency had expected thousands and, worse yet, there were almost no applications from qualified women and minorities. Four months after Nichols' company, Women in Motion, Inc., was hired, NASA had 4,411 applicants, including over 200 from minorities and 470 wom-

en. Deadline for applying is June 30.

In spite of all her years aboard a TV studio spaceship, Nichols' romance with the real thing did not begin until a 1975 Star Trek convention. "I heard Dr. Jesco von Puttkamer of NASA and it blew my mind when I found out all the benefits we're enjoying as a result of space research," Nichols says.

She visited NASA and other space facilities and her enthusiasm led to the recruiting assignment. Von Puttkamer says proudly, "She spent about a year educating herself."

Nichols, 44, seventh of 10 children, was born in Robbins, III. (a haven for in-

Nichelle Nichols was communications officer Lieutenant Uhura on Star Trek. Above, she explains the workings of an Apollo capsule model to schoolchildren in Cleveland.

terracial marriages which her paternal grandfather helped found). She grew up in Chicago. An actress since 14, Nichols dropped out of high school for an acting job—and later took an exam to earn her diploma. Primarily a stage actress, she has toured in *The Blacks* and co-produced the James Baldwin play *Amen Corner*. Along the way she was twice married and divorced. A 25-year-old son, Kyle Johnson, also an actor, lives with her in Beverly Hills.

In spite of the recent shelving of a proposed feature-length film of *Star Trek*, Nichols-Uhura expects someday to be at the communications console again. She is proud of that role. "Lieutenant Uhura is a very strong and positive human being who lives 300 years from now. She is pulling at me to open the doorway to her universe. I'm trying to see that we have a sound space program in which all people are represented and involved. It's good old IDIC—infinite diversity in infinite combinations."

A TOUCH OF HYATT

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RELIGION

month to see TM's new claim at work. But many were sorely disappointed, and at some centers there were shouts of "put up or shut up" from the audience. No demonstrations were offered, no secrets revealed. Instead, the spectators had to be content with stories from advanced meditators on their own experiences with levitation. In order to learn more, they were told, they would have to become experienced meditators themselves, then sign up for intensive training for up to ten weeks at \$245 a week.

Test It! Some skeptics think that TM's new promise to teach "supernormal" talents is simply an attempt to lure more devotees to the movement. But true believers point out that the Maharishi Mahesh Yogi's claims for TM have been doubted before—and vindicated. When the Maharishi introduced Transcendental Meditation to American audiences twenty years ago, he described it as a technique that reduces stress and enhances creative intelligence, and he invited scientists to test it. Soon, medical researchers were verifying many of TM's therapeutic effects.

Levitation may be a little harder for the scientific community to take, because it seems to violate so many physical laws. One levitator's description of his experience is typically mystical: "I was sitting on a couch and I felt a tremendous amount of energy go through me. Then my body moved up and down two or three times. I thought, 'What is this?' and the next experience I had was hearing my body touch the floor—about 6 feet away from where I had started."

Such stories have been circulating among TM devotees ever since January, when the Maharishi told 900 teachers at his Swiss headquarters that the "world's consciousness" had been sufficiently raised through TM to permit the next step in mind-body integration. By the end of the course, reports Robert Oates, the Maharishi's biographer, 90 per cent of the teachers had experienced levitation, and some had even made themselves invisible. Now they are ready to pass the flight training along to other devotees. As a precaution, TM officials are outfitting their meditation centers with foam-rubber coverings on the floors. "You don't always come down gently," observes Oates.

Motin Public: Privately, some meditators complain that the Maharishi is making them look foolish by forbidding levitators to demonstrate their powers in public. TM officials explain that they are not willing to provide spectacular displays, but that they hope to disarm skeptics with solid scientific explanations. Already, a team of scientists at the Maharishi International University in Iowa is marshaling evidence from current research on the power of brain waves. Soon, they predict, they will have objective proof that the mind can control matter, as Hindu yogis have always taught.

—KENNETH L. WOODWARD with PAMELA ABRAMSON in New York and bureau reports

LIBERTARIAN EVENT DRAWS VARIED LOT

BY WILLIAM ENDICOTT

Times Staff Wrifer

SAN FRANCISCO—A visitor to the lobby of the Sheraton-Palace here Thursday could be excused for thinking he had stumbled into a convention for either gays, prostitutes, feminists, conservative businessmen, peaceful anarchists, political activists—or all of the above.

What he was seeing was the opening session in a national convention being held this week by the Libertarian Party, a still young and still struggling political party made up of true believers in the concept that government is best which governs least.

When the political left and the political right meet, it undoubted-

ly will be in the neighborhood of the Libertarian Party.

"From the outside, I guess this looks like a crazy coalition," said the party's national chairman, Edward H. Crane III of San Francisco. "But there's a real espirit de corps, even among the gays and the conservative business types."

What apparently molds that espirit is a simple philosophy on

which Libertarians base their political views.

"We believe in the right of each individual to lead his or her life in the way that individual chooses, just so long as you respect the right of others to do the same," Crane said.

For that reason, the party has invited a mixed bag of speakers to address it this week on a mixed bag of topics ranging from gay

rights to tax resistance.

Among the scheduled speakers are a noted political maverick and former Democratic presidential candidate, Eugene McCarthy; Timothy Leary, the one-time sultan of LSD who now advocates interplanetary migration; Margo St. James, a leading advocate for the

Please Turn to Page 16, Col. 1

LIBERTARIAN EVENT DRAWS VARIED LOT

Continued from Third Page

decriminalization of prostitution, and Doug Hoiles, who bills himself as a "tax revolt activist."

When Leary was asked by a reporter Thursday if he was a member of the Libertarian Party, he quickly replied, "I tend to join any party as long as it's fun."

By the admission of their own leaders, it is "awfully remote" that the Libertarian Party will become a strong national political force anytime in the near future.

There are a "lot of oxen that get gored" when talk turns to abolishing such things as Medicare and the public schools, Crane admitted.

Still, the party bills itself as the "party of principle," the inference being that the two major powers—Democrats and Republicans—have little or none of that, and it hopes that by 1984 it can field a genuine presidential threat.

The irony of 1984 as a target date is not lost on party members, who know that year normally is associated with George Orwell's famous novel, which promises more, not less, government

Ray Cunningham of San Francisco, the party's California chairman, said the two major parties are "dominated by individuals not responsive whatsoever to any ideology . . . A Libertarian feels there are political principles of right and wrong."

Said Cunningham: "Winning is not everything if you compromise what you stand for to win. A Ted Kennedy or a Richard Nixon is capable of supporting any position if he thinks the majority wants it."

In its basic form, the Libertarian view, according to Crane, is that government should function only to provide essential services such as police protection and national defense and

courts to handle disputes.

Otherwise, Crane said, Libertarians believe government should stay out of people's lives, and that means Libertarians oppose government controls over personal behavior, such as prostitution and gambling, and also oppose gun controls, wiretapping, censorship, the increasing bureaucracy and taxes.

"In short, Libertarians are the only ones who advocate personal and economic freedom and a noninter ventionist foreign policy," he said.

The party's foreign policy is simple. "We'd like to be a giant Switzerland... and not treat foreign policy as if it was some sort of John Wayne World War II movie."

The party estimates it has only about 10,000 members nationwide, but its 1976 presidential candidate, Virginia television producer Roger MacBride, won a spot on the ballot in 32 states and polled nearly 200,000 votes.

Scientists Seek To Untie' The Bonds Of Aging

By MARY GANZ

SAN FRANCISCO (AP) — Scientists studying tiny "hooks" that tie up gencs and make people grow old said this week that they are close to finding a chemical that will dissolve the bonds and reverse the aging process.

"I'm not interested in gaining five years here and five years there," said Dr. Johan Bjorksten of Madison, Wis., a pioneer in the study of aging. "I'm shooting for the whole

pot.

The "whole pot," he figures, is an average life expectancy of 800 years — the lifespan he said was projected by the life insurance industry if everyone could stay as healthy as they are at 16.

He added that scientists realistically could hope for only 10 per cent success, adding 80

years to everyone's lifetime.

Bjorksten told a news conference at the American Chemical Society that aging occurs when two molecules in a gene, the basic unit of heredity, become hooked together by a

process called cross-linking.

"If you put handcuits on two large men, "kiv are hampered by it and they don't do the work they have to do so well," he explained. "Then it a third rule comes along and you handcuff him to the or drive, it's going to be even more upsetting.

It is the same when molecules are linked together in this way, he said — the cells that contain the molecules do not function as well.

If they are skin cells, the skin becomes icathery; if they are cells of an artery, the artery loses its ability to expand and contract with the flow of blood, and this may lead to strokes and other diseases.

What scientists need to find, he said, is an enzyme — a special kind of chemical — that will dissolve the bonds that link the molecules together. When they find that, he said, they will have found a formula to reverse the process of aging.

Already they have found one enzyme that seems to work in most cells, he said, but, he added, it will be a miracle if the first one they have tested turns out to be a magic formula

for youth.

Rolf Martin, a scientist from City University of New York, speculated that, with intensive research, "I think we could have the the thing done in five to 10 years."

He pointed out that eliminating cancer as a cause of death would increase the average

lifespan by only two years.

"Fifteen to 20 years is the very least we can do for ourselves," Martin said.

Bjorksten and Martin said that until their research is completed, people can extend their lives a few years by healthy living. They added that reports that Vitamin E slows down the aging process have been confirmed by their research, but cautioned against huge

ast April, while reading the papers the morning after the President's energy address to the nation, I was struck by a statement attributed to Carter's pollster and adviser, Patrick Caddell: "The idea that big is bad and that there is something good to smallness is something that the country has come to accept much more today than it did 10 years ago. This has been one of the biggest changes in America over the past decade."

Since the nation had just been exhorted to embark on the most herculean technological, economic and political enterprises, this reference to smallness seemed to me to be singularly inapt. Waste is to be deplored, of course, and inefficiency. But bigness? I had not realized that the small-is-beautiful philosophy had reached the White

A few days after the Carter speech, I had an opportunity to attend a lecture by E. F. Schumacher, the author of "Small Is Beautiful," the book that, since its publication in 1973, has become the Koran of the antitechnology movement. I listened, bemused, as Schumacher depicted a United States in which each community would bake its own bread and develop its own resources, a nation of self-reliant craftsmen where interstate transport would practically disappear.

The energy crisis could be solved, Schumacher maintained, only by replacing our sprawling network of industrial metropolises with numerous small-scale production centers. Schumacher's audience listened, entranced. It was clear that the energy crisis was giving new life to an idea which otherwise might have died a natural death.

On my way home, I found myself thinking about a telephone call I had received a few weeks earlier from a consultant to the power industry. He was concerned about an article by Amory B. Lovins, a British physicist, which had appeared in the October issue of Foreign Affairs. The article, which argued the small-is-beautiful position forcefully, had been extensively quoted in the international press and had been the subject of the most reprint requests ever received by Foreign Affairs.

Opposition has not been slow to rally. The man who called me put together a collection of rebuttal essays prepared by people prominent in the fields of energy, academe, industry and labor. This imposing pamphlet

Samuel Florman is the author of "The Existential Pleasures of Engineering." His article is exerpted from Harper's.

Small May Be Beautiful, But It Doesn't Really Work Very Well

BY SAMUEL C. FLORMAN

has been circulated in large quantities wherever its sponsor fears the Lovins article might have made an impression. It appears that the metaphysical struggle between small and big—reminiscent of the argument over the number of angels that can dance on the head of a pin—has become a real issue.

The small-is-beautiful believers, as exemplified by the Lovins article, commence their campaign with a critique of our existing energy technology, especially our nationwide grid of electrical power. The deficiencies of this system are obvious enough. Electricity is created in huge central plants by boiling water to run generators. Whether the heat that boils the water is furnished by oil, coal, gas, nuclear energy or even by solar energy, a great deal of energy is wasted in the process, and even more is lost in transmission over long lines. By the time the electricity arrives in our home or factory and is put to use, about two-thirds of the original energy has been dissipated. In addition, the existence of what Lovins calls "the infrastructure" of the power industry itself tens of thousands of workers occupying enormous office complexes—costs the system more energy and costs the consumer more money.

Technological efficiency, however, is not a standard by which the small-is-beautiful advocates are willing to abide. Lovins makes this clear when he states that even if nuclear power were clean, safe and economic, "it would still be unattractive because of the political implications of the kind of energy economy it would lock us into." As for making electricity from huge solar collectors in the desert, or from temperature differences in the oceans, or from solar energy collected by satellites in outer space—these also will not do, "for they are ingenious high-technology ways to supply energy in a form and at a scale inappropriate to most enduse needs." Finally, he admits straight out that the most important questions of energy strategy "are not

mainly technical or economic but rather social and ethical."

So the technological issue is found to be a diversion, not at all the heart of the matter. The *political* consequences of bigness, it would appear, are what we have to fear. A centralized energy system, Lovins tells us, is "less compatible with social diversity and personal freedom of choice" than the small, more pluralistic, approach he favors.

But diversity and freedom, at least in the United States, are protected and encouraged by strong institutions. Exploitation thrives in small towns and in small businesses. Big government and big labor unions, for all their faults, are the means by which we achieve the freedoms we hold so dear.

When big organizations challenge our well-being, as indeed they do—monopolistic corporations, corrupt labor unions—our protection comes, not from petty insurrections, but from the biggest of all organizations, the federal government. And when big government itself is at fault, the remedy can only be shake-ups and more sensible procedures, not elimination of that bureaucracy which is a crucial element of our democracy.

The next argument that Schumacher and Lovins present is the social one. Even if large organizations "work" technically and politically, it is claimed, they do not work socially. Only in small social groups, apparently, is it possible for people to "matter." Schumacher and Lovins would not appear to have read such books as "Winesburg, Ohio," "Spoon River Anthology," and "Main Street," with their picture of the American small town as a petty, cramped and spiteful community. Cities and small towns will always have their defenders, but the constantly discussed question about whether it is "better" to live in the city, the country or the suburbs is a matter of taste which cannot be settled

by self-appointed intellectual mandarins.

Perhaps what lies at the heart of the new worship of smallness is an increasing revulsion against the ugliness of much of industrial America. Dams, highways and electric transmission lines, once the symbol of a somewhat naive commercial boosterism, are now depicted as vulgar. But this association of bigness with lack of taste is not warranted. The colossal works of man are no more inherently vulgar than the small works are inherently petty. We prize robustness in life as well as delicacy. Rousseau, coming upon a Roman aqueduct, had this to say:

The echo of my footsteps under the immense arches made me think I could hear the strong voices of the men who had built it. I felt lost like an insect in the immensity of the work. I felt, along with the sense of my own littleness, something nevertheless which seemed to elevate my soul; I said to myself with a sigh: "Oh! that I had been born a Roman"

Economic and social arguments aside, Schumacher and Lovins maintain that their philosophy is founded on a base of moral conviction, of thrift, simplicity and humility. We have sinned by being wasteful, ostentatious and arrogant. Thus smallness becomes a symbol of virtue.

For a moment, as at every step along the way, we are inclined to agree. The message has an appeal. The problems of our age—the environmental crisis, the energy crisis, the depletion of our natural resources—are; we suspect, caused by our profligacy. Improvidence, it would appear, has become the cardinal sin.

But even the most useful moral precepts—such as patriotism—often have a dark underside. In the present instance, the thrift being preached lends itself to a smallness of spirit. The humility proposed evokes those Oriental attitudes which counsel the masses to accept their wretched lot. Such fatalistic beliefs may be useful in adding a measure of serenity to our private lives, but they are insidious elements to inject into debates on public policy.

Much of the debate over big versus small recalls the Lilliputians going to war over the question of whether eggs should be opened at the big or little end. Smallness, after all is a word that is neutral—technologically, politically, socially, asethetically, and, of course, morally. Its use as a symbol of goodness would be one more entertaining example of human folly were it not for the distrubing consequences of the arguments advanced in its cause.

Here's Your World of Opportunity

See Educational Guide Pages A8-9

Yankee Turmoil

Billy Martin Speaks Out

See Sports Today



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LATEST NEWS SPORTS

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Mind-Control Plan

Millions Spent on CIA Program

c. New York Times News Service

WASHINGTON — Several prominent medical research institutions and government hospitals in the United States and Canada were drawn into a secret, 25-year, \$25-million effort by the Central Intelligence Agency to learn how to control the human mind.

The existence of the agency's investigations into behavior and thought control was previously known. But through access to 2,000 CIA documents and wide-ranging interviews, a group of New York Times reporters has developed new information about the cost of the program, the range of its penetration into prestigious research centers, the identities of some institutions, the secret funding conduits by the agency and the concerns about the program expressed by some scientists.

The original research was spurred by the conviction — later proved unfounded — that the Russians and Chinese had developed brainwashing and mind-control devices. But CIA quickly turned to seeking an offensive use for behavior control. It sought to crack the mental defenses of enemy agents — to be able to program them and its own operatives to carry out any mission even against their will and "against such fundamental laws of nature as self-preservation."

It channeled funds through three private medical research foundations. One of these, the Geschikter Foundation for medical Research in Washington, D.C., is still active. Another, the Society for the Investigation of Human Ecology Inc., was disbanded in 1965. A third named in one report was the Josiah Macy Jr. Foundation, also active, but Dr. John Bowers, director of the foundation, said there was no indication it had been a conduit for CIA funding.

The CIA also paid for experiments under the guise of contracts issued by other government agencies and had access to millions of dollars in behavioral control experiments conducted by the armed services.

By the early 1960s the CIA had

(Continued on Page A-2, Col. 4)

THE BOTTOM LINE:

Use 1

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Carter Energy Plan Approaches House Approval

- Herald-Examiner Wire Services

WASHINGTON - President Carter's much-criticized but largely intact energy plan appears headed for approval in the House of Representatives by the end of this week.

Under the masterful leadership of House Speaker "Tip" O'Neill, the energy bill reached the House floor Monday after emerging from six committees somewhat watered down but not seriously weakened.

The Boston-born political manipulator and his lieutenants managed to block in the committees amendments most strongly opposed by the adminis-

tration, such as lifting price controls on natural gas, providing unrestricted but the administration hopes to have on natural gas, providing unrestricted development incentives for the oil industry, and postponing until 1982 the gas guzzler tax on large autos.

Only a limited number of agreed upon amendments will be offered on the House floor, a ruling that is likely to prevent Republicans and oil state Democrats from making any further major changes in the bill.

Speaker O'Neill has promised President Carter he will have the legislation passed in the House by Friday, when that body is scheduled to adjourn for its summer recess. Senate action the program enacted into law before the end of the year.

As the bill neared passage in the House, it became increasingly apparent that the energy plan would not achieve all the President hoped for when he submitted it to the nation in

The President made a direct public appeal for passage of critical key elements, including a five cent per gallon increase in federal gasoline taxes.

Republican leaders predicted they will be able to defeat the proposed gas

"I would think there is a good chance to stop that," House Republican Leader John Rhodes said shortly after formal debate began on the complex legislative package.

Carter said there were five critical elements in the energy package:

-Rejection of deregulation of natural gas. Instead, Carter urged support for the \$1.75 per thousand cubic feet ceiling price included in his energy package and approved by two House committees.

-Support for rebates for Americans

-Rejection of a Republican plan for plowing back new crude oil taxes to the oil industry to encourage produc-

-Support for the five cent gas tax hike, with the proceeds going for mass transit and state highway construc-

-Backing for a heavy tax on industrial users of oil and natural gas as a means of encouraging them to switch to coal.

The President's message came shortly after the House began debate on

the legislation, one of the most complex bills ever considered by Congress The proposal was sent to Congress tast

Supporters of deregulation are somewhat limited by the rules under which the bill will be voted.

Earlier, the Senate Energy Committee approved 10 to 6 a proposal by Sen. Howard Metzenbaum, D-Ohio. which is designed to limit production of gas guzzling cars.

.The committee voted to also require that all cars get a minimum gas mileage of 16 miles per gallon in 1980 rising to 21 miles per gallon in 1985.

Los Padres Blaze 50% Contained

. By JOHN LUCERO Herald-Examiner Staff Writer

Erratic 40 miles-per-hour winds continue to hamper 500 firefighters near Lake Cachuma in the Los Padres National Forest in Santa Barbara County-where leaping flames have destroyed 1,000 acres of dry brushland.

The fires, 22 miles northwest of Santa Barbara, is 50 per cent contained but steep terrain has also made it difficult for firemen to control the spréad. At the fire line are personnel from the U.S. Forest Service, Santa Barbara County and State Dept. nf Forestry. Three helicopters, bulldozers and four air tankers are being utilized in the fire fight.

Evacuations have occurred at three locations - Cachuma, Davey Brown and Nira campgrounds. Six firemen sustained minor burns and one Forestry! firefighter was hospitalized with head injuries.

Los Padres National Forest spokesman said the brush is burning in a northwesterly direction, but no structures are involved. Closest structures are the Figueroa Summer Homes tract two miles away.

The fire broke out Sunday in the Caehuma Campground and its exact cause is under investigation, Forestry spokesmen added.

Crews numbering 150 men from the county, Dept. of Forestry and the U.S. Forestry Service continued to fight a 50-acre-brush fire in the Indian Creek area near Camuesa Park, eight miles north of Santa Barbara and 14 miles southeast of the Lake Cahuma fire.

The fires, of undetermined cause. broke out at 8 p.m. Sunday. As of 7 p.m., Monday, the fire was 50 per cent encircled, Forestry personnel said.

Access to the fire was difficult here also because of the deep terrain and extremely thick brush. No structures are involved and firemen have battled the plaze in 90 to 100 degree temperatures.

No injuries have been reported. Full containment is expected at 6 a.m. today," officials said.

A fire which started in a rubbish bin caused \$40,000 damage to a 20-unit enertment complex under construction Hollywood Way and Gle

rard in Sun Valley *-brush afire.



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Son of Sam Claims 6th Life In Series of 13 Shootings

NEW YORK (AP) - The mad gunman who calls himself Son of Sam claimed a sixth life Monday when a young woman died of a massive gunshot wound in the skull.

Stacy Moskowitz, a 20-year-old blonde secretay, was fatally wounded at 2:30 a.m. Sunday while she sat in a parked car under a bright street light with Robert Violante, 20. Violante, who also was shot in the head, lost his left eye and may lose the sight in his right eye.

While 13 shootings have been attributed to Son of Sam and his .44caliber Bulldog revolver, seven of the victims have survived. Miss Moskowitz was the sixth to die since his first known attack one year and three days ago.

"An animal like this has to be caught, not to die or be killed but to be tortured for life," Stacy's mother, Neysa Moskowitz, told reporters.

Stacy's father, Jerome Moskowitz, also wept as he told reporters, "I lost a daughter I loved very much ... she

STACY MOSKOWITZ minute to minute before she succum-

"We did everything we could — it just wasn't enough," Dr. William Shuchark, a neurosurgeon, said.

bed to brain damage.

Meanwhile, a force of 200 New York police started anew in their search for the psychopathic killer. The Sunday shooting complicated their problems:

under surveillance when Miss Moskowitz and Violante were shot on a lovers lane in Brooklyn.

• The latest shootings were the first outside Queens and the Bronx, where beefed-up police patrols and teams of police decoys had saturated normally calm neighborhoods.

Police now have a victim who saw the gunman, described as being white, about 5 foot 7, about 150 pounds, between 25 and 30 years old and carrying a .44-caliber revolver. One previous victim also saw him, but could not supply a good description.

A doctor at Kings County Hospital said Violante had given police a description of the gunman. "He actually saw him," said Dr. Jeffrey Freedman.

But Freedman, an ophthalmologist, noted that Violante had lost one eye to the gunman, with the other at least partially damaged. "I don't know if he (Violante) can identify him, since we a'll be able to see."

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never be the same."

We have entered an era in which production in one country is tightly linked to the policies of other countries. According to Forecasting International's Marvin J. Creton, "thirteen basic raw materials are required for a modern economy; these include: aluminium, chromium, copper, iron, lead, manganese, nickle phosphorous, potassium, sulfur, tin, and tungsten. In 1950 the United States had to import more than onehalf of its supplies of four of these; by 1970 the list had increased to six. By the end of the century the United States will be dependent primarily on foreign sources for its supply of each of the thirteen except phosphorous.

continued on page 8

A Taint of Scholarly Fraud

The late British psychologist Cyril Burt was eminent in his profession: he held the psychology chair at London's University College, was knighted by King George VI and won the Thorn-dike award from the American Psychological Association. 'As a government adviser, he helped restructure the British educational system in the 1940s. Now, five years after his death, Burt is the object of a growing scandal. He has been accused of doctoring data and signing the names of others to reports that he wrote. If the charges are proved true, said *Science* magazine last week, "the

the decimal point as more and more twins were studied—an extraordinary and highly unlikely coincidence. Yet most experts assumed it was an honest and unimportant mistake. "As he got old," said British Psychologist G.C. Drew, "he was remembering old figures that got stuck in his mind."

The doubts became public knowl-

The doubts became public knowledge when the London Sunday Times reported that Burt's co-authors of the later twin studies—Margaret Howard and J. Conway—are not listed in London University records and are unknown to 18 of Burt's closest colleagues. The reve-

lation is crucial: the two women were presumably Burt's field investigators on the twin research at a time when the psychologist was becoming feeble and deaf. It thus seems increasingly possible that the women never existed, that their investigations were never carried out and that Burt invented them and their reports.

Since the Sunday Times story, a Manchester professor has recalled meeting a Margaret Howard in the 1930s, but the only other traces of Conway and Howard are their signatures on reviews in the late 1950s published in the British Journal of Statistical Psychology. Those writings, mostly attacking Burt's enemies, stopped around the time Burt stepped down as the journal's editor. Says Princeton Psychologist Leon Kamin, an opponent of Burt in the heredityintelligence debate: "It was a fraud linked to policy from the word go. The data were cooked in order for him to arrive at the conclusion he wanted.'

Burt's allies prefer to believe the psychologist was careless but honest. The suggestion of fraud "is so outrageous, I find it hard to stay in my chair," says Harvard Psychol-

ogist Richard Herrnstein. "Burt was a towering figure of 20th century psychology. I think it's a crime to cast doubt over a man's career." Professor of Educational Psychology Arthur Jensen of the University of California at Berkeley adds: "If Burt was trying to fake the data, a person with his statistical skills would have done a better job. It is a political attack. The real targets are me, Herrnstein and the whole area of research on the genetics of intelligence."

At best, Burt's methods were incredibly sloppy. The raw test sheets on the twin studies were among papers stuffed

into half a dozen tea chests and later destroyed. Many of his professional articles do not give primary data, referring readers to unpublished reports. Some of those reports, says Kamin, are at least as hard to find as are Howard and Conway.

Why did Burt's work go unchallenged during his lifetime? Says Philip Vernon, a collaborator of Burt's now at Alberta's University of Calgary: "There were certainly grave doubts, although nobody dared to put them into print because Burt was so powerful." In fact, he was powerful enough to see his ideas on heredity and intelligence translated into educational policy. As a government adviser in the 1940s, he played a prominent role in setting up the three-tier British school system that pigeonholed students on the basis of an IQ test given at age eleven.

That system has since been dismantled, and the controversy over Burt is unlikely to have much effect on educational policy. It will also make little impact on American psychologists who believe that heredity is crucial to intelligence: they have produced several twin studies similar to Burt's. Says Herrnstein, "I know of no correlation of Burt's which is seriously challenged in the literature. But Harvard's Richard Lewontin, a population geneticist, says that Burt's work with twins "is the only large study which is methodologically correct, so its loss is no trivial problem for the heritability people. It is also not nice for them to have this mess in their backyard.

It is also a mess for the entire field of psychology, which is still struggling to be taken seriously as a rigorous science. When a leader in the field is shown to be either a fraud or spectacularly inept, it is psychology's loss.

A Sound Theory

After listening carefully to tape recordings, 40 men and women students at West Virginia University tried to estimate the height and weight of each of the 30 speakers on the tape. To the delight of Norman J. Lass, who ran the experiment as chairman of the university's speech pathology and audiology department, those estimates were surprisingly accurate. On the average, the volunteer students came within 3½ lbs. and I in. of picking the weight and height of the speakers—far closer than they would have achieved with random guesses. "Apparently," says Lass, "there are adequate perceptual clues in the voice, which reflect, to some extent, the physical features of height and weight." He is confident that future research will prove his thesis. Hello, officer, I'd like to report an anonymous obscene phone call from a man who is 5 ft. 9 in., 168¹/₄ lbs. . . .



PSYCHOLOGIST CYRIL BURT (1961)
Were the data cooked?

forgery may rank with that of the Piltdown man."

Much of Burt's reputation rested on his prominent role in the debate about heredity and intelligence. His studies of identical twins who grew up apart indicated that heredity—rather than environment—explains most of the differences in IQ scores. But shortly before Burt's death in 1971 at the age of 88, there were academic murmurs that the psychologist's data were suspect. For one thing, the statistical correlation between IQ scores of his identical twins remained the same to the third place after

THE AIR

Talking Back

ROM time to time in recent months, I've found myself writing about the largely authoritarian role that so much television broadcasting has assumed in our era. The monochrome and monotone "voice" of the networks has been frequently alluded to, as has the framing or focussing authority of most of their news programs. Indeed, "power" on the part of the television establishment and "passivity" on the part of the audience have been perhaps the two key words, or concepts, with which to consider the influence of television up to now in our society. On a different, more emotional level, intimations of Orwell's "Big Brother" have surrounded us in the air (and on the airwaves) since the period of the first exploitation of broadcasting by national authorities, in the early part of this century; and, with these intimations, there has often developed in members of the public a feeling of resignation and inescapability concerning such distant matters.

What I would like to do this week is to temporarily reverse myself, because, while the present of broadcasting is undeniably authoritarian, the present also contains the future, and the future (which we are beginning to deal with now) contains at least the possibility of

something very different. In short, I should like to risk boring you for a while on a subject that neither you nor I have had much apparent interest in: that of space satellites and satellite communications. For modern satellites and their ground receiver-transmitters have already reached a level of technical competence and economic practicality which has brought them further and further into the arena of political decisions. A number of political decisions concerning them have already been made, and, in fact, there is much about the current satellite situation which is roughly comparable to what obtained in regard to television broadcasting in the nineteen-thirties;

that is, much of the basic technology is already in place, and the rest is in the process of development, and what remains is to make the final, hard-toreverse political decisions that will determine the shape of satellite communications in the nation as, back in the nineteen-thirties, they determined the shape of our present commercial television service. As it happens, the token reason, or "news peg," for my belated attention to satellites is a substantial, and not altogether impenetrable, document that I have lately been reading, which is titled simply "Description of Public Broadcasting Satellite Interconnection Plan." Briefly, what this proposal encompasses is the nation's first satellite broadcast television network, wherein the Corporation for Public Broadcasting will be empowered to lease three, and eventually four, transponders (or channels) on Western Union's Westar I satellite, and also to construct about a hundred and fifty-five ground receiving stations, of which five will have the ability to transmit as well as receive. It is a fine, ambitious plan, and is currently under active consideration by the F.C.C. (which is expected to approve it by the end of the year)—circumstances that provide, I think, as good an opportunity

as any for trying to understand, or perhaps unbore oneself about, these new devices and the new kind of communications they make possible.

E might as well start at the beginning. For practical purposes, satellites might be said to derive from what was surely one of the most important and ghastly inventions of the twentieth century: the rocket that was known by the Germans (who first launched it at Peenemünde in 1942) as the Aggregate-4, and later by the British, whose cities it assaulted, as the V-2. The second step followed logically from the first. In 1957, employing a rocket derived from the Aggregate-4, the Soviet Union launched and orbited the first satellite—Sputnik. Since Sputnik, literally thousands of satellites have been put into orbit, most of them by the Soviet Union and the United States, and with roughly ninety per cent of them in the service of the military: the "guardians of our skies," as our own are sometimes referred to in defense-contractor advertisements. The metaphor is doubtless accurate, though not entirely reassuring—especially since in these matters insufficient notice is usually paid to the American citizen, whose taxes furnished the eighty-five billion dollars that provided the space program that evolved the rocket and communications skills that resulted not only in our landings on the moon and

Mars but also in the present multitude of "guardians" orbiting above us.

Here, though, we may as well consider only civilian communications satellites; tll is, those few satellites now in the air that are the property of large American communications companies. For instance, what is special about satellite communication? What ar its advantages over present standard form of communications The answer is deceptively simple, and easy to gloss over. Satellite communication is more efficient than ground communications. Efficiency has come to be one of those modern terms that often defy penetration, though it's worth trying to get



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some idea of the real meaning. Consider, in the matter of transoceanic communications, that twenty years ago the only way of speaking by telephone between New York and London was via radio, which was expensive and, because of atmospheric conditions, undependable. When the first transatlantic telephone cables were put in operation, in 1956, the service became more dependable, but it was still expensive and the transmission was far from ideal. The cables could carry sixty phone conversations simultaneously but no television. The extent to which a present-day satellite supersedes cable technology is as follows: the cost of orbiting the satellite is a fraction of the cost of cable laying; a satellite can handle fourteen thousand phone conversations simultaneously, with high dependability and fidelity, or relay twenty-four color-television programs simultaneously. Similarly, in the area of transcontinental communications, whether by phone or television signal, the advantage of a satellite system is so great in terms of cost, multiplicity of access, and fidelity as not to be isefully defined by the catch-all term fficiency. At present, for example, nost telephone and television commuication is carried along the telephone ompany's vast and expensive network f cables, or else is beamed along the wer microwave system, which reuires line-of-sight transmission and reeption, and thus the construction of ceiving-and-transmitting towers at ound thirty-mile intervals across the country. With either microwave or cable communication, the cost and difficulty of sending a voice or a television gnal over long distances involve not ply the huge outlay for construction nd maintenance but also an elaborate nplifying apparatus which must be hilt into the system at regular intervals or boosting the original signal along its ay, and which frequently produces than satisfactory fidelity. With ellites, however, the basic communions structure is far simpler, involvnot thousands of miles of cable, or ers (with all their attendant switchand boosters and maintenance), but orbiting devices of enormous sensitivity, with a multiplicity of channels, and with ground sending or receiving terminals of ever-increasing simplicity and cheapness. For instance, many ground receiving stations still require antennas of up to a hundred feet in diameter, and might cost nine million lollars to build. But some such stations an now be served by antennas no nore than thirty-three feet in diam-



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eter, and cost around three million dollars; and the Japanese have recently developed a prototype TV receiver (dependent on new satellites with increased transmitter potency) that costs fifteen hundred dollars and could probably be marketed eventually for a good deal less. Technically, home ownership of a direct-broadcast satellite television receiver is virtually within reach.

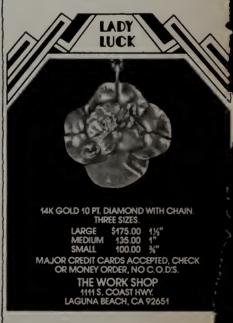
The first of the civilian (or commercial) communications satellites was Telstar I, which was put in orbit in 1962, and which was paid for and owned by A.T. & T. By present standards, Telstar was a fairly primitive device. Admittedly, it could handle one TV signal or a hundred phone conversations simultaneously, compared with the sixty conversations of the first transatlantic cables, but there was a built-in limit to its overall effectiveness, in that the satellite's orbit around the earth was elliptical and low. Since television signals travel in straight lines, this meant that a program could be beamed from Point A, received by the satellite, and amplified and transmitted to Point B only at a time when the satellite was in direct line of sight with both points. If Telstar sped out of this line of sight too soon, or if the timing was inconvenient, program transmission had to wait until the satellite had returned after orbiting the globe. An alternative, which was not tried, would have required a continuous, revolving parade of as many as thirty Telstars in orbit, with one of them always in range.

The reason that this costly and cumbersome method was not attempted derives from an imaginatively simple solution proposed by Arthur C. Clarke, who is an engineer as well as a successful author of numerous books of science fiction. Clarke's solution was based on the calculation that a satellite placed in orbit at 6,830 m.p.h. at an altitude of 22,300 miles above earth would take nearly twenty-four hours to circle the globe. Thus, it would be "geosynchronous" with the rotation of the earth; that is, the speeding, orbiting satellite—appearing to stand still-would remain in line of sight constantly. Also, the height of the orbit would be much greater than that of Telstar, and would therefore permit a vastly greater number of sending and receiving points; in fact, no more than three satellites, properly placed, could provide a global communications system. In 1963, Syncom II, the first working geosynchronous communications satellite, was built by the Hughes Aircraft Company and launched by



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NASA. The Hughes Company built three Syncoms that were launched by NASA and one, launched in 1965 and named Early Bird, that was operated as a civilian communications satellite by the International Telecommunications Satellite Consortium, or Intelsat.

As in a Biblical family tree, Telstar in 1962 begat Comsat (or the Communications Satellite Corporation), which begat Intelsat. For, as a result of the success of A.T. & T.'s elliptically orbiting Telstar, one of those important debates occurred in the upper reaches of government and business which go largely unnoticed by the public; this one dealt with the question of whether a civilian satellite communications system should be kept in the hands of the federal government or be handed over for development to the "private sector," or business. Business prevailed, and Comsat was formed in 1963, supposedly as a partnership between the large communications corporations and the public, with fifty per cent of the stock in the new company being owned by A.T. & T., I.T.T., RCA, Western Union, and more than hundred smaller companies, and he remaining fifty per cent being sold, through the New York Stock exchange, to "the public." .T.&T. was a main force in the rigins of Comsat, and since A.T. & T. lready had an immense investment in ground communications facilities in the Inited States, it was decided that omsat would concentrate its attenon on international communications. Hence the organizing, in 1964, of Intelsat, which has since grown to encompass ninety-four nations, five satelites, and a hundred and nineteen earth stations around the world. Intelsat is an operating organization that leases its atellites and facilities to each member ation's designated representativehich in the United States is Comsat.

Within the past few years, there has en a second major debate—also gely unnoticed by the public-which resulted in the orbiting of several msats, or domestic satellites. This ate had to do not with whether the blic or the private sector should control the new domestic satellites but with whether these satellites should be a monopoly of Comsat or be owned and operated by other communications companies—the assumption, at least in certain quarters, no doubt being that Comsat already half represents the public. In 1972, following its bent for pseudopopulist communications programs, President Nixon's Office of Telecommunications Policy proposed

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an "Open Skies" policy, which stated, roughly, that any applicant possessing suitable financial and technological capacity might launch and operate a communications satellite, and in due course this policy was adopted by the F.C.C. So, while Comsat handles international satellite communications for the people of the United States, a new procession of familiar corporate giants is entering into control of domestic satellite communications, Western Union and RCA have both launched their own satellites, as have A.T. & T. and G.T. & E., which have also joined with Comsat on satellite projects. And several more are waiting in the wings.

Thus, two important moves have already been made in shaping the role of satellites in our lives; major decisions have been reached, in the modern quasi-parliamentary fashion-not so much clandestinely as by open, unintelligible compromise between big government and big business-while the public, informed by neither party of any special urgency in this matter, blithely plays in its back yard. As has been remarked, it is a situation not totally dissimilar to the one that obtained in the nineteen-thirties, when the F.C.C. (the public's agency) began to assist in the shaping of the present commercial network system.

HERE are further decisions in the making, however, and the Corporation for Public Broadcasting's Satellite Interconnection Plan marks another step along the way-a step in the right direction, it appears from the current proposals. First is the obvious, and not at all unimportant, question of cost. Despite the expense of leasing satellite channels and constructing ground facilities, C.P.B.'s satellite system should be cheaper in the long run than any comparable system based—as is virtually all television transmission, commercial or public-on the leasing of A.T. & T.'s so-called long lines. But more important even than cost, and buried within the concept of efficiency, is the significant potential—the essence—of satellite communications: tight lines, inc. namely, that they represent the first visible, plausible promise of what might he clumsily called intercommunicative broadcasting, of broadcasting that does not always, or inherently, proceed in one direction, from authority to public.

Today, most television programs flow in a more or less direct line, along A.T. & T.'s cables or microwave stations, either from west to east or from east to west. Television-broadcast traffic across the continent is thus limited,



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in a manner comparable to the limitation on railroad traffic, by the sheer expense of laying track as well as by the difficulty and the cost of dispatching programs in various directions. It is technically possible for a network to originate a broadcast of a football game in Dallas or a news story in Boston, but the cost runs high and the trafficscheduling problems are considerable; ven for wealthy networks, there are early limits to the number of times can be done. Public television's prosed satellite system will not seem at to make any drastic change in bresent arrangement, but it will to make true interconnective gramming more possible. It will in to do away with the old "raild-track" system, and perhaps, along it, certain assumptions by the audiand the station managers as to constitutes broadcast traffic. At eart of the new system, after all, fact that the satellite is already up apparently "parked" in the sky, in fact speeding along with the the earth, making occasional, ent course adjustments by means of tiny engines, and usually accompanied by a twin: a backup satellite, to be brought into operation if the first one should somehow fail. The rigid, limited network of the long lines is replaced by trigonometry, and thus it is no more difficult, electronically, to dispatch a television signal from Minneapolis to Miami than from Minneapolis to St. Paul. Also, the variety of signals relayed is defined not by the dimensions of an unchangeable cable but by the leasing of transponders on a satellite. With C.P.B.'s satellite system, individual public stations will have far greater flexibility in their programming, choosing, alternately, between regional broadcasts and the national feed. Most important, too, C.P.B.'s five proposed transmitting stations will not simply permit but encourage a degree of regionally originated programming (that , programs not from New York or Los Angeles), which now remains at the mercy of leased lines, high costs,

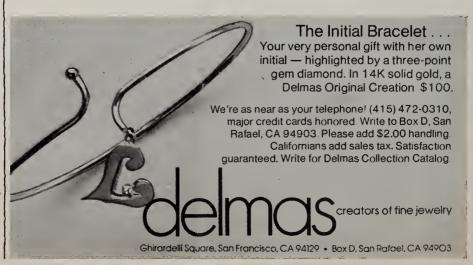
Admittedly, there is a problem in talking about the future, for the future usually involves technical progress, and this progress is often presented in such unreal or utopian terms as to be oppressive—or, in layman's terms, boring. One likely result of C.P.B.'s satellite wstem, at least for the first few years fter it comes on-stream, probably in 1979, is that Thoreau's mid-nine-teenth-century demurrer about the nation's first transcontinental telegraph

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line will seem to have new pertinence. "But what if Maine and Texas," Thoreau remarked on hearing of this early wondrous system, "have nothing to communicate?" Or, as we may well soon have cause to ask, What if Houston has nothing better to relay, via the heavens, to New Rochelle than yoga instruction or "Mister Rogers"? However, I suspect that the significance of the proposed development will go far beyond the merits or demerits of programming. For it seems to me that these new and as yet immade satellite systems, even when stripped of the glamour of cost statistics and the futuristic jargon-poetry of scientific utopias, represent nothing less than man's most potent tool, to date, for reversing-or, at least, holding his own against—the supposedly irreversible thrust of technological society, which has been carrying us steadily forward in this century toward greater homogeneity and thus toward totalitarianism.

The evils of a technological world are commonplaces by now, and appear to be accepted by so many people hecause they can conceive of no alternative—the exception being those brave, poignant, guerrilla-type counterattacks by the young, who storm the redoubts of Technology armed with little more than sensibility and handmade jewelry. In addition, the baby-and-bathwater argument is much used, or leaned upon, by those who try to feel hopeful about the general drift of modern societies. That is: is it not necessary to give up certain amenities or freedoms in exchange for, say, polio vaccine, computer billing, and the boneless chicken, and might one not altogether lose the "new" in trying to regain the "old"? It is not too much to say that the people of advanced societies, such as ours, have been largely immobilized before technology: on the one hand, enjoying its benefits and repeating its pieties, and, on the other hand, giving increasing evidence of nervousness, interior dismay, and a propensity for mild rebellion against the very technologies-whether those of politics, communications, or merchandising-that they are assisting in creating.

Consider only broadcasting technology. Broadcasting did not create our technological society, but in this century it has accompanied the shaping of our country, and the form we have permitted broadcasting to assume in our midst has had much to do with the evolving relations of the mass, or multitude, of people with authority. Broadcasters periodically make much of the

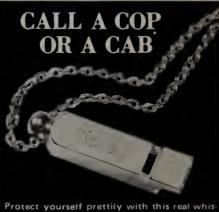




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deference they pay the public, but in reality this occasional deference is paid either to the authority of the state or to the rival authority of business. The form or "message" of broadcasting, especially that of the powerful television-broadcasting industry, has been for years that of a central transmitting authority (albeit divided into several companies), which "speaks," one-way only, to the "mass." Surely, then, what explains the popularity of (or "craze" for) CB radios is a delight on the part of the public employing economically accessible chnology for talking back, for denassifying itself. Or, on a more primiive level, what are the phone-in radio hows but an attempt on the part of e audience to de-audience itself, to tercommunicate, to participate? The oth is that, by and large, our vaunt-Era of Communications has been a nge, depressing period during which hassed citizenry—though, for the part, it has no longer been asbled in city squares, listening to a from a loudspeaker—has been ibled metaphorically, before the y separateness of a hundred miltelevision sets, looking at as well as listening to distanced presences that transmit only, and never receive. It is an unnatural state of affairs—in some ways like slavery—which poses great unseen burdens on society and can endure for longer than anyone imagines. Surely the conditions of depression that occur in so many areas of the modern world-whether clinical or otherwise, and whether they take the form of the "sullen" East German or the "apathetic" American voter—derive at least in part from the continued, nearly unrelieved, public situation of being talked to by authorities, however sometimes benign, and never being able to talk back.

Satellite communications on a scale proposed by C.P.B. will obviously not reshape the emotional structure of the world. But there is much at stake here in the principle of two-way broadcast transmission and in the public's right and need to have access to the new technology: to get its voice back. Also, there is much risk, and even danger. How will governments govern when a capacity exists for a nearly instantaneous citizen response—to a new stripmining bill or a state of war? (A more pressing question, one imagines, and one that continues to overhang the noisy politics of the century, is, in whose behalf do governments govern, anyway?) The larger hazard facing the new communications, then, is that the par-







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the children. Temporizing reasons will be found; that national security must be protected, or that the efficiency of large corporations must be preserved, or that the children will break the new toys. Already, in the matter of the relatively modest C.P.B. proposal, Western Union has requested a right to employ public troadcasting's earth stations for its own business. No authority ever gladly lets anything go.

All the same, there is something deeply stirring about these new possibilities almost a logic behind them that, one feels, will sooner or later put them in the hands where they will do the most od-the hands of the public, that multitude of non-children. Perhaps what is most stirring of all is a glimpse, or intimation, of man's ability to get himself out of trouble, and with something sturdier than sensibility to aid hm. To put it another way: Big Brotler and his Newspeak were political fantasies of that remarkable writer George Orwell which proved to be imaginatively, and almost factually, correct. But the wider human context of "1984," with its irredeemably passive, and even unpleasant, "proles," represented (as Raymond) Williams has also pointed out) a more personal projection of Orwell's fantasy, his social pessimism, and his cultural view, and it has not specifically, or necessarily, turned out to resemble the world we have been living in. In the second half of this century, the seemingly calm oceans of passivity and resignation have been steadily disrupted by the actions and voices of real (and often very brave) people.

What I suspect is needed now, from us, is not so much physical bravery as something that is differently difficult to provide: acts of faith and consciousness. That is, we should compel ourselves to stay awake, and not be oppressed, or "bored," too easily by the murmurs or clangings of new technology. Technology, after all, is still man's handiwork; man is the one to watch. -Michael J. Arlen

The economy will be endangered if Congress passes legislation requiring the Federal Reserve Board and other agencies to do more of their decision-making in public, Federal Reserve Board chairman Arthur Burns said yesterday....

"It has now become a popular saying among articulate advocates of disclosure that the government's business is the people's business, and that the people's business ought to be carried on in public, Burns said in his prepaid remarks.—San Francisco Sunday Examiner & Chronicle.

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The Arab Peace Offensive

By ARNAUD DE BORCHGRAVE

The moderate leaders of the Arab world are conducting an unprecedented diplomatic offensive. In the past two weeks, Egyptian President Anwar Sadat has received three U.S. Congressional delegations, including one led by Israel's staunch friend, Democratic Sen. Abraham Ribicoff of Connecticut. Sadat told one of the groups: "In six months, we can be in Geneva and negotiate a comprehensive peace settlement." Do the Arabs really mean it, or is this just another effort by one of the protagonists in the Middle East to influence American public opinion? And if the Arabs do mean it, why are they talking sweet reason now? Clearly, the road to peace remains strewn with obstacles and pitfalls. But on the basis of my own recent conversations with some of the top Arab leaders, I think the incoming Carter Administration has the best opportunity yet to try for an over-all peace settlement in the Middle East.

"We believe the objective conditions for progress in the Middle East are better now than they have been perhaps at any time since the creation of the state of Israel," Secretary of State Henry Kissinger declared last week. Those conditions are largely the result of the peace

settlement in Lebanon.

Mending Fences: The Arabs realized some months ago that the Lebanese civil war-which had Syria, Egypt and the Palestinians at each other's throats—was blocking any progress toward ending the Arab-Israeli dispute. At their mini-summit in Riyadh last month, the Arab moderates decided that the bloodshed in Lebanon had gone on long enough—and that the time had come to try to restore some semblance of Arab unity. They agreed, in effect, to let Syria occupy all of Lebanon and assume control over the Palestine Liberation Organization. In return, Syria agreed to mend its fences with Egypt and allow Sadat to resume his role of Arab spokesman in pressing for an over-all settlement.

The Arab moderates also ganged up on the Palestine Liberation Organization behind closed doors in Riyadh. They told PLO leader Yasir Arafat that his dream of a secular state in all of Palestine was a thing of the past. Instead, the Arab leaders said they would try to get him a truncated Palestinian state on the West Bank and in the Gaza Strip as part of a Middle East peace settlement. But they informed Arafat in no uncertain terms that his new state would be expect-



Ribicoff gives Sadat a present: Are the Arabs really ready for peace?

ed to co-exist peacefully with Israel. Arafat had no choice but to agree. There are still radical Palestinians around who are unwilling to play by the new rules, as was demonstrated when socalled Black June terrorists attacked the Amman Intercontinental Hotel last week and were eventually crushed by the Jordanian Army. Still, the PLO itself has now begun making conciliatory noises. For the first time, its chief spokesman on foreign affairs, Farouk Kaddoumi, told newsmen at the United Nations last week that his organization would be willing to assume the responsibility of running a government in the West Bank and the Gaza Strip in the event of an Israeli withdrawal. Kaddoumi also said the PLO would take up in late December or early January the question of forming a provisional government-in-exile.

Concessions: The strategic thinking of moderate Arabs is that an end to the draining conflict with Israel will finally allow them to concentrate on the modernization of their own countries. They see the U.S. as the key, partially because it represents the largest single source of Western arms and industrial technology, but more importantly because it is the only country in a position to put pressure on Israel to make the necessary concessions for peace. Even Ribicoff was impressed by the desire for peace in the Arab world. "I believe you are a unique leader," he told Sadat. "Our respect for you is unbounded."

It is not clear yet precisely what terms the Arabs will propose for a peace settlement. Like the Israelis, they are prudent enough not to tip their hand in advance. But the Arab position is unfolding in broad outline. They hint that the Palestinian state set up on the occupied West Bank and in the Gaza Strip would be federated in some way with Syria and Jordan. The advantages of this would be twofold: Syria and Jordan would be able to guarantee the security of the new state—thus making less critical the question of its demilitarization—and at the same time, the two countries would be able to keep their new junior partner from causing trouble with Israel.

Talking Point: The desire of the Arabs for an over-all settlement is evident in the way they are downplaying the complicated subject of the future of Jerusalem. Pressed on this, they say that it should be left until the very end of the negotiations. They suggest, however, that an expanded Arab borough of East Jerusalem could be created, stretching as far as Ramallah and Bethlehem. As a talking point, they say the whole city of Jerusalem could be governed by a single mayor, possibly with an Arab and an Israeli alternating in the role—a proposal patently unacceptable to Israel.

In return for U.S. aid in negotiating an over-all settlement, the Arabs are hinting that they could offer the West economic incentives. Saudi Arabia, at least, is talking of guaranteeing the United States stable oil prices for perhaps ten years, during which time the cost of petroleum would not rise any faster than the rate of Western inflation. Israel has grave doubts about the sincerity of the current Arab peace offensive, and given the history of the region, Jerusalem would appear to have good cause. But at least for the moment, the moderates are riding high in the Arab world. It is my feeling that if this opportunity for an over-all peace settlement is not grasped, Arab moderates may not be so firmly in control a year from now.

a year from now.

War's Fourth Dimension

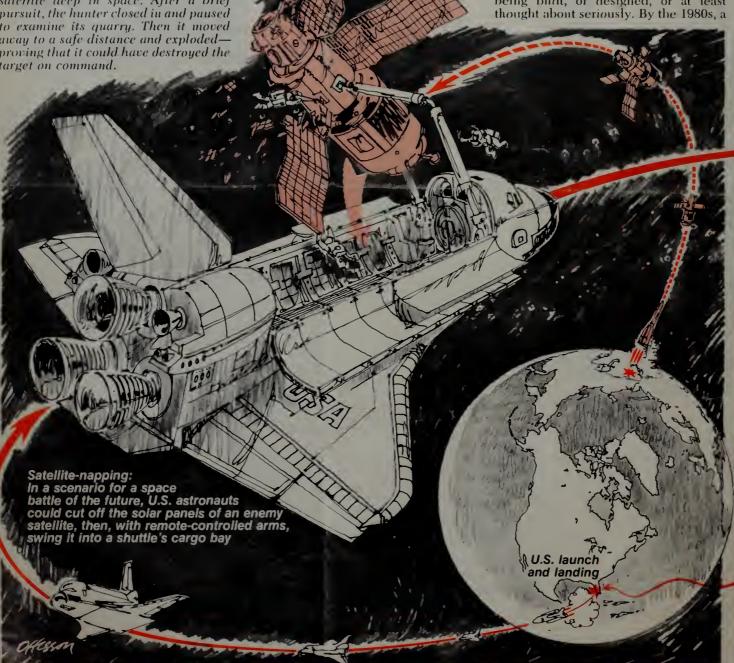
Orbiting over the Indian Ocean, a pair of U.S. spacecraft—an early-warning satellite and a companion vehicle relaying its signals back to earth—watched for the telltale glow of Russian missiles being launched from Siberia. Suddenly, a powerful beam of infra-red light zeroed in on them. The early-warning satellite went blind. The sensors on the relay satellite lost contact with the horizon. Its electronic equilibrium destroyed, the satellite began to tumble in space, and its signals went astray.

A few weeks later, the Soviet Union renewed its tests of a new weapon. A Russian spacecraft lifted off from the Tyuratam cosmodrome in Kazakhstan and set off in chase after another Soviet satellite deep in space. After a brief pursuit, the hunter closed in and paused to examine its quarry. Then it moved away to a safe distance and exploded—proving that it could have destroyed the target on command.

These events may sound like a seience-fiction scenario for war in the 21st century, but both episodes actually occurred within the last year. During that time, the Soviet Union tested devices that can cripple or destroy satellites in space. Whether the U.S. has run similar tests remains a military secret, but it is clear that the Pentagon is working in that direction. Back in 1967, after the two superpowers ratified a treaty outlawing nuclear weap; us in space, most people assumed that the heavens had been declared off limits to warfare. But a lot has

happened since then, and now military analysts are beginning to take seriously the notion that one day a war might be fought in space.

In the era of détente, a major conflict between the U.S. and the only other power able to fight in space—the Soviet Union—seems almost unthinkable. But military men are paid to plan for wars that no one wants or expects to fight. Armies, navies and air forces now are heavily dependent on space technology; they use satellites for communications, surveillance and navigation by bombers and warships. It is not so giant a step for the superpowers to decide that, during some future crisis, they might want to make war on each other's spacecraft. The machines for waging that war are already being built, or designed, or at least



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PISCES (Feb. 20 to March 20) Prospects of promotion or change of position are better now than in the past. Forget all the reticence in personal relationships.

MANSON INTERVIEW

Continued from First Page

said, "In other words, the district attorney's sex paranoia would have me doing all kinds of lascivious things because in his lugubrious brain he would be doing these things."

On the subject of drug taking by himself and his "family," Manson told Fort:

"I took LSD and it's heightened my awareness a little bit; made me aware of a few things I already knew. We weren't all that much into drugs. Everybody's saying we were but that's not the truth. The truth is that we took acid whenever it was around... Sometimes it would be maybe once a week and sometimes once a month... We weren't into speed or hard drugs. A little hash and a little grass. Just a blaze kind of get-loaded social thing."

Miss Van Houten is putting forth a

"diminished capacity" defense, claiming that her ability to make decisions was severely diminished because of the heavy use of LSD and the domination of Manson.

Last Quadruplet Joins Her Family

The James Dew family was reunited in Poway Monday when the last of quadruplets born in February was released from Childrens Hospital. The quads, born 12 weeks premature weighed a little over 2 pounds each birth and now range from 6 to pounds.

Rachel Diane, the sickest of babies with severe lung prowas retained nearly four month intensive care unit at the h

Dog, Equine Owners Must Re City Licenses Starting Friday

Dog and equine owners were reminded by the Los Angeles Department of Animal Regulation Monday that it is licensing time for the 1977-78 fiscal year.

Beginning Friday, new licenses will be required for all dogs four months and older and horses, ponies, burros and mules.

For unaltered dogs, the fee is \$8.50; for spayed or neutered animals, \$3.50. The equine fee is \$6. Valid antirables certificates must be presented with application for all dog licenses. Senior citizens—62 years of age or older with maximum incomes of \$7,500—are entitled to free dog licenses and spay-neuter services.

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Street, 215 W. Ann 11th Ave.; West I souri Ave.; West St., Chatsworth; I San Pedro; and E man Way, North I

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Sun., July 10, 1977 - Part 1

Soviet Radio Plays U.S. Protest Songs

MOSCOW (AP)—Soviet radio listeners tuned in to an unusual 45-minute concert of protest songs by Johnny Cash, Joan Baez, Judy Collins and other American folk singers Saturday.

The program was the latest move in a mounting Soviet campaign to convince its citizens that human rights are frequently violated in the United States, a campaign evidently designed to blunt President Carter's criticism of civil rights violations in the Soviet Union.

The theme was emphasized during the program by a narrator who delivered a social commentary on American life.

"If you are poor, you have no freedom, no happiness, your spirit is broken, what then? Different people react in different ways, but many land in prison. The American prisons are packed up tightly with such people," the commentator said in introducing Johnny Cash's "San Quentin," recorded live at the California prison.

"The big criminals pay off, they hire excellent lawyers," the commentator said. "And if they do get into jail, they land in a special prison where there are no bars on the windows, where they can play golf in the open air, or

baseball."

The narrator pointed to treatment given convicted Watergate figures such as former Atty. Gen. John N. Mitchell, who is serving a 21/2-to-8 year term at the minimum-security Maxwell Air Force Base, Ala., prison, an unwalled facility located across from an Air Force golf course.

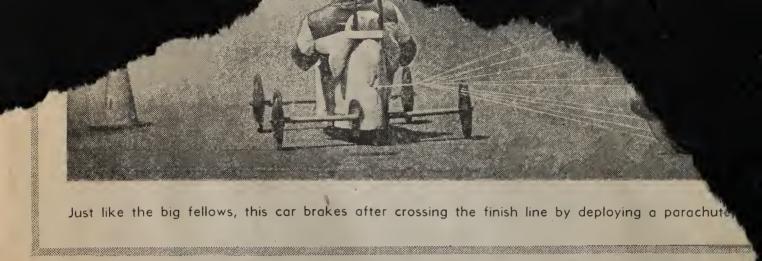
By contrast, he said, San Quentin is one of the "most terrible prisons," primarily holding "people who were born with no rights." He added that "people who are fighting for human rights are also spending time in prison."

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Van Houten Jury Hears Manson Tape

Cult Leader Denies in Interview He Ordered Slayings

BY BILL FARR
Times Staff Writer

After more than two months of testimony that has almost always focused on Charles Manson, the jury in the retrial of Leslie Van Houten heard the voice of Manson himself Monday.

What the jurors heard was a tape recording of Manson being interviewed by Dr. Joel Fort, a San Francisco psychiatrist called by Dep. Dist. A'tty. Stephen Kay as a prosecution rebuttal witness.

The jurors last week listened to Fort's version of what Manson said about Miss Van Houten but her defense attorney, Maxwell Keith, asked that the tape be played so they could hear it from Manson himself.

Fort led off the two-hour interview, which took place last March at

Folsom Prison, by saying to Manson:

"Miss Van Houten says it's all your fault. Her attorney says that she didn't have anything to do with it and was just a robot. And I don't feel that is an adequate explanation. So I came here to give you a fair chance to present your point of view."

Manson denied that he directed Miss Van Houten and two of his followers, Charles (Tex) Watson and Patricia Krenwinkel, to kill Rosemary and Leno La Bianca and also denied that he was even at the Los Feliz area residence the night of Aug. 10, 1969, when they were stabbed to-death.

Asked by Fort about how much influence he had over Miss Van Houten, Manson replied:

"People had Leslie Van Houten long before I had her. Her mother had

her first, her dad had her, her parents had her, her school had her, TV had her, the movies had her, she was in a convent for a Buddhist, the Buddhists had her.

"And you come up and say, 'Well you had influence over her.' Man, I've seen the broad only a few times...I never paid that much attention to her...I'm telling you the truth. I never had that much effect on Leslie, because I never—how can one guy have effect over 30 to 50 broads"?

In discussing sexual activities of his group, Manson told Fort, "Ah, my moral fibers are not that of Hustler magazine. My moral fibers are not of the loose and promiscuous nature that they would project upon me."

Refering to prosecutor Vincent Bugliosi, the 42-year-old cult leader Please Turn to Page 8, Col. 1

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full-blown war in space could leap off the drawing boards.

In theory, the battle for control of space could determine the outcome of a war on earth by crippling one side so badly that it would be beaten or forced to surrender. Some military thinkers even suggest that the superpowers may ultimately be able to fight bloodless wars in space, settling the issue there without ever firing a shot on earth. That is almost certainly a utopian view; both sides have back-up, earthbound equipment for communications, surveillance and navigation that presumably would be used before the loser in space would capitulate. But the fact that anyone could even talk of fighting a surrogate war in orbit shows how far and how fast the technology for space war has advanced.

'Death Ray': Some people are appalled by suggestions that warfare might spread from the land, the sea and the air into the eerie fourth dimension of space. But that is a logical, if menacing, outgrowth of the revolution in military technology that has occurred in the past decade. New computers, guidance systems, sensors and lasers have created a breed of "one shot, one kill" weapons for conventional warfare. The stunning kill rate of tanks and other vehicles by "smart bombs" and wire-guided missiles during the 1973 Mideast war gave an early hint of the changes to come. Since then, engineers have transformed the fighting capabilities, actual or potential, of superpower armies and navies (NEWSWEEK, April 22, 1974, and Oct. 27, 1975).

If it comes, a war in space will be fought with a stunning array of futuristic weapons. New lasers are finally realizing the Buck Rogers dream of creating a "death ray." It is now possible to build hunter-killer satellites that can stalk enemy spacecraft, inspect them and even destroy them. Satellite could fight satellite as each side strove to knock out the other's early-warning system. Laser-equipped satellites might also create, at last, a workable anti-ballistic-missile system capable of shooting down enemy rockets from platforms in space.

Late in the 1990s, a superpower crisis escalates into an exchange of nuclear threats. Suddenly one side launches a barrage of rockets. They enter orbit and close in on the other nation's spy satellites, blowing them up one by one and crippling its early-warning system.

Russian hunter-killer satellites pose the greatest immediate threat to the U.S. in space. Beginning in 1967, the Soviets conducted a series of sixteen experiments in which unmanned hunter-killer spacecraft followed Soviet target satellites into space, maneuvered close enough to inspect them and later blew themselves up. Pentagon analysts concluded then that the U.S. had no real need for a hunter-killer weapon of its own, but even so Defense Department officials were relieved when the Soviet



tests stopped in 1971. Last February, however, the Russians resumed hunter-killer testing with a new series of five-shots, and now a note of worry has crept into U.S. statements on the subject. The Pentagon recently conceded that "we have been concerned over the survivability of our satellite systems, and we are making aggressive basic technology research efforts to protect our satellites from this potential Soviet threat."

The U.S. is already developing a broad range of new technology to defend its own satellites. Perhaps the most fascinating proposal is for the U.S. to put a large fleet of "dark" satellites into space. These small spacecraft would have radar absorbing exteriors and would generate their own electricity with miniature nuclear reactors, instead of using more conspicuous solar panels. They would be hidden in very deep space and would stay silent except in times of crisis. Even then, the dark satellites would be nearly invisible to Soviet radar and radio interceptors, and there could be so many that the Russians could never shoot them all down.

Another way for the U.S. to protect its satellites would be to develop its own hunter-killers. They could destroy enemy spacecraft in various ways—with lasers, by blowing themselves up, or by 'seeding" the paths of their targets with flotsam or small explosive charges. There is some public evidence that the Pentagon is doing just that. Despite heavy censorship, the Senate Space Committee is or record as observing during hearings last spring that the U.S. is "trying to develop a system that will actually impact" on enemy satellites. And when Navy Secretary William Midlendorf told newsmen recently that the Russians were using satellites to give their ballistic missiles mid-course guidance, he added, "We've got to work like mad to get them [the satellites] down real fast." When a reporter asked if the U.S. was developing a killer satellite, Middendorf responded, "We're working in that direction.

With its warning systems out of commission, the weakened superpower strikes back. Its own hunter-killer satellites stalk the heavens and use short. sharp bursts of laser rays to disable all the enemy spacecraft they can find. Soon each side has destroyed the other's unarmed satellites, and the killers begin to hunt one another. It is the first real dogfight of the first war in space.

By the 1980s, the laser may be the basic weapon in space. The U.S. is already using laser-equipped radar to track Russian spacecraft, and there is strong evidence-despite official U.S. denials-that the Soviets used lasers last year to temporarily blind the American early-warning satellites. Defense Secretary Donald Rumsfeld said the U.S. satellites had probably been dazzled by the glare of natural-gas fires along a pipeline in Western Russia. But he avoided saying flatly that lasers were not the cause. Pentagon skeptics point out that blinding episodes occurred over a period of three months and that one of them lasted for four hours. The radiation was between ten and 10,000 times as strong as any natural blaze, and other defense satellites failed to see the alleged "fires. "We have been flying those satellites for fifteen years," said one analyst. "It's a matter of logic. Either the sensors are in terrible shape, or it's the first time they were so badly fooled.

Revolutionary Weapon: But if the Russians did use a laser, it was based on earth, where the enormous electrical power needed to generate the beam of intense light was readily available. The need for electricity is what prevented anyone from putting lasers into orbit long ago. In the past five years, however, technology has taken a spectacular leap forward with the development of high-intensity chemical lasers, which work by mixing gases such as hydrogen and fluorine and need no large amounts of electricity. Chemical lasers have produced pulses of 200 billion watts for 20-billionths of a second, and researchers say that even so short a burst can vaporize metal and produce destructive shock waves. The chemical laser, says a former Pentagon scientist, "is a perfect example of something that didn't even exist a short time ago, and now has its own high priesthood.

If the chemical laser can be perfected, it will almost certainly be a revolutionary veapon. Its beam flies dead straight to its

AMONG WORLD'S DEADLIEST

Silent, Slithering Trio Guards 'Star of Lanka' Gem Exhibit

STOCKHOLM (UPI)—Hundreds of Swedes visited the exhibition of precious jewels at the Sri Lankan/Embassy Wednesday, but it was the guards—three of the deadliest snakes in the world-that took their breath away.

The three hungry snakes encircled the "Star of Lanka," a 392-carat blue star sapphire worth \$429,000, on display behind plate glass as the highlight of the exhibi-

The snakes—a Ceylonese saw-scaled viper (Echis carinatus), a tropical rattlesnake (Crotalus durissus terrificus) and an Argentinian horned viper (Cerastes cornuta)-are there to deter thieves with smash-and-grab ideas.

"We selected the most poisonous, the most aggressive and the fastest snakes in the world for this job," said Stockholm snake expert Olle Rosenqvist.

"Together, these three species form a le-

thal triangle impossible to crack.

"I put them on the edge of starvation for a week and they are in top shape right now, stuffed with poison," he said. "Each one of them is capable for seven fatal bites. With those three together, death is 100% certain within 10 minutes."

Apart from the two-foot snakes, electronic devices also were utilized to guard the hundreds of sapphires, rubies and other dazzling jewels, all worth about \$1.7 mil-

"The snakes are most beautiful, but if I had the choice, I would pick the sapphire," said a woman in her 60s.

The exhibition, which opened Monday, was part of a Sri Lanka State Gem Corp. project to establish European markets. The gem collection will be shipped home after the display ends Sunday.

"We want to make Sri Lanka (formerly Ceylon) well-known not only for its good tea but also for its gems," said Ambassador Rex Koelmeyer

It was the first time the "Star of Lanka" —found three years ago in a Ceylonese gem pit—was on display outside Asia. It has been outside Sri Lanka only once before—for a Tokyo exhibition in 1973.

Visitors reeled back when Rosenqvist opened the show case to i wall the golf ball-sized sear sapphire. The nakes flicked their forked tongues as Rosanqvist, who has 22 years of experience with poisonous snakes, slowly stuck his right arm into the case and placed the sapphire in the center.

"One needs at least 80 milligrams of antipoison serum to survive a bite, " he said.

Serum is kept at the Karolinska Hospital and at a downtown pharmacy. But, said Rosenqvist, "we would have difficulties ... because we would not know which snake was responsible for the bite.'

10 Killed as Train Rams Bus

ZAGREB, Yugoslavia (A)—Ten persons were killed and 20 injured Wednesday when a passenger train crashed into a bus on the outskirts of Zagreb, the capital of Croatia. Most of the casualties were passengers on the bus.

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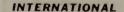
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to the PUBLIC for IMMEDI. SETTLEME

SUN., NOV. 14, Pre-view: 1 P.M. to a Beverly Hills

RAMADA IN For Information call (213) 65 AUCTIONEER: SHIMON





1979. Bigger than the old DC-3 airliner, the spaceship will carry seven astronants and 65,000 pounds of eargo—twice the payload and three times the volume of the biggest rockets now in use. It will return to earth under its own power, land like a conventional plane—and be ready for another trip in ten days.

Until the Russians build one of their

own, the shuttle will give the U.S. an advantage in space. Its crew will be able to repair or refuel satellites already in orbit and to pick up worn-ont or damaged spacecraft and replace them with new ones. If the U.S. decides to put weapons into orbit, the shuttle will be able to rearm them if the need arises. In a crisis, it will be capable of swiping a Russian spy satellite or an orbiting laser station from the sky and bringing it back to earth. In fact, its hold will be big enough to carry an entire Soviet Salyut space station down from orbit, if that should suit America's purpose (drawing, page 46). "I think the space shuttle has let a lot of demons out of the cave," says one U.S. space planner. "It has got people thinking."

Dangerous Road: The U.S. lead in 'developing a shuttle is partly offset by the fact that the Russians are considerably more active in space at present. In 1974 and '75, the Soviets launched 199 satellites into orbit; the U.S. launched only 48. But although the Russians may have a strong lead in hunter-killer techniques, the U.S. is believed to be ahead in lasers. A recent study for the Pentagon by two major defense contractors indicated that the U.S. could probably have its first laser weapons in orbit by the early 1980s.

Whether it will do so is open to question. During the past year or so, military thinkers in and out of the Pentagon have quietly begun to debate the wisdom of preparing for a war in space. Those who oppose the effort suggest that all forms of war ought to be kept out of space and that neither side would ever tolerate the other's deployment of weapons in space. The critics also argue that no superpower could actually start a space battle without striking all enemy satellites at once; so devastating a move might provoke an immediate nuclear strike in reply.

Some of those who support a military effort in space believe that fighting there might reduce the bloodletting on earth by allowing conflicts to escalate more slowly and by giving each side time to think about the consequences of failing to solve a crisis. Others, like Dr. Malcolm Currie, the Pentagon's director of research, argue that in any case the U.S. must keep up with Russia. In a recent speech, Currie contended that "the Soviets have ... seized the initiative in an area which we hoped would be left untapped. They have opened the sector of space as a new dimension for warfare, with all that implies. I would warn them that they have started down a dangerous "Just how far the Pentagon plans to go down that road is a military secret, but clearly the journey has begun.

-KIM WILLENSON with EVERT CLARK in Washington



target at the speed of light—making it easy to aim and almost impossible to dodge. The Army, Navy and Air Force already are experimenting with the device as a land-based defense against enemy planes and even guided missiles. An armada of laser-equipped satellites in space also might be able to destroy both enemy spacecraft and ICBM's as they emerge from the atmosphere.

Blinded by the loss of their satellites, the two superpowers stagger along in a state of crisis, unable to reckon who would win a nuclear exchange—and therefore unwilling to launch one. At last, one side sends up a manned reconnaissance satellite. The other nation launches a space shuttle into orbit and

the giant ship quickly overtakes the new space station. When the gap is closed, astronauts emerge from the shuttle and chop off the enemy spacecraft's spreading solar wings. Two long mechanical arms pull the space station into the body of the shuttle, which flies back to earth with its prize.

Perhaps the most powerful potential weapon in the U.S. arsenal is the mammoth shuttle, the world's first real spaceship, a prototype of which was displayed publicly last September. A joint project of the National Aeronautics and Space Administration (NASA) and the Pentagon, the shuttle is currently under construction in Downey, Calif., and scheduled to make its first trip into orbit in



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Death Valley Days

Italian Pride in Columbus' Discovery

It is strange indeed that David Saavedra (Letters, Oct. 28) should find it disagreeable for Italians to display the Italian flag in the recent Columbus Day parades held in Chicago and New York. Does he expect the Italians to fly the Spanish flag on Columbus Day?

He is correct, of course, in stating that it took Spanish ships and Spanish crews under the banner of Castile to make Columbus' dream a reality. But these were merely accessories in the Great Discovery made possible by the courage, perserverance, faith and consummate skill of the great Genoese navigator.

Of extreme significance is that the voyage, unlike most voyages, such as Magellan's, Diaz's, etc., was not mandated by the crown but was entirely Columbus' own idea conceived in his adventurous brain in 1480. It was nurtured, researched, studied and even tried out on "dry runs" to Guinea in 1482-1484.

Having failed to interest King John II of Portugal in 1484, Columbus presented the plan to the Spanish monarchs, Ferdinand and Isabella in 1486, who assigned the project to the Talavera Commission for further investigation. The plan was stalled for four years until 1490 when it was rejected. It was because of Columbus' faith and perseverance that a voyage to the Indies was finally approved after the fall of Granada on January 2, 1492. The entire cost of the voyage cost less than \$50,000 in today's dollars, part of which was financed by Columbus and his backers.

Spain was to become the most powerful and richest country on earth as a result of Columbus' four voyages and his discoveries. Yet in the end Columbus was forsaken by the Spanish sovereigns and died in 1506, a lonely figure, in Valladolid, not too far from the Spanish court.

"The whole history of the Americas stems from the four voyages of Golumbus," stated the famous historian Samuel Eliot Morison . . . "and as the Greek city-states looked back to the deathless gods as their founders, so today independent nations and dominions unite in homage to Christopher, the stout-hearted son of Genoa, who carried Christian civilization across the Ocean Sea"

> MARIO DI GIOVANNI Santa Monica

llege After 30 Years

things no end—it's only offers starvation. You realize that the land of plenty has changed your life so greatly that you cannot er again tolerate starvation. The















U.S. Survey Finds Rise in High School In Use of Marijuana

WASHINGTON, Nov. 23 (AP)-More than half this year's class of high school seniors tried marijuana and three out of 10 were users at graduation, according to Government surveys.

The National Institute on Drug Abuse surveyed 17,000 high school seniors in 130 schools last spring and found that 53 percent had tried marijuana, as 48 percent for the class of 1975. as against

The survey, released today, said that 32 per cent regarded themselves as current marijuana users.

Meanwhile, 53 per cent of those 18

Meanwhile, 53 per cent of those 18 to 25 years old had tried marijuana, according to another institute survey, and 25 per cent were current users. It showed that 22 per cent of 12-to 17-year-olds had experimented with marijuana and 15 per cent were regular or occasional users.

Cigarettes Feared by Most

Although cigarettes and alcohol were sed more frequently than marijuana by

sed more frequently than marijuana by oung adults, 57 per cent of high school miors thought there was a serious ealth risk for cigarettes while only 40 er cent felt the same way about marijua-

The findings indicated that the use SD has remained virtually constant the st four years and that abuse of heroir d psychotherapeutic drugs has been unanged the last two years. The rate of anged the last two years. The rate of caine use was the same this year as 1975.

Dr. Robert L. DuPont, the institute's rector, said that comparison of the surves showed "an apparent stabilization drug use and the attitudes toward ugs in general."

"The public, including youth, clearly cognizes the addictive effects of tobacand alcohol and has very negative attides toward the use of all illicit drugs cept marijuana," he said. "Although ug abuse continues to be widespread every region of the country, we are every region of the country, we are eeing some slight downward trends for imphetamines, LSD and barbituat Marijuana is the only drug showing definite upward trend." and barbituates

Two other Government-sponsored surveys released at the same time showed that drug abuse cost the nation from \$8.4 billion to \$12.2 billion a year, more than alcoholism but less than tobacco smoking.

The school survey showed that only 39 per cent of the class of 1976 disapproved of experimenting with marijuana, down from 47 per cent in 1975. The number disapproving of regular marijuana use was 70 per cent, as against 72 per cent

last year.

Some 33 per cent of the seniors favored legalizing marijuana, while 29 per cent felt the penalty should be no worse than a parking ticket. Some 25 per cent favored criminal sanctions; 13 per cent

All age groups viewed tobacco and al-cohol as more addictive than marijuana, according to the surveys. Both youths and adults ranked heroin as more addicthan any other drug, with alcohol

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cism from paste lay people would subside upon reading the book and understanding the context of pastoral concern in which the rites are placed.

"At precisely the time when individuals are most lonely and need to establish links of communication with others," the book says, "members of the Christian community know least how to respond, and the person is usually met with silence, embarrassment and whispered conversations that end abruptly when the person enters a room."

The church has excluded itself from divorce situations "partly beuse it is assumed that the divorcing uple wish to keep their private after the stothers, partly because breakdown of a marriage in a circle of intimates is an imme-

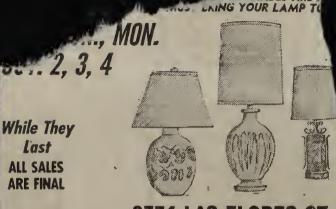
we all make mistakes. heads and be thankful for the love you share. Your lives and our lives can still be filled with joy."

FDA Tests Link Between Diet and Hyperactivity

WASHINGTON (UPI)—The Food and Drug Administration said Friday that it had signed a \$106,840 contract to test a theory that color additives in food cause some children to be hyperactive.

The agency said the test would involve 20 children aged 1 through 6 who are on color-free diets and who have shown less hyperkinetic activity.

The contract is with the Kaiser Foundation Research Institute of Oakland, Calif.



TILLES AKE

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Corner of Myrtle Ave. & Lemon St., 4 blocks So. of Foothill Blvd. Directions: 210 Fwy. to Myrtle ley take San Bernardino Fwy. In to 605 Fwy. North; then continue on 605 Fwy. to the 210 Fwy.

THEY BOB, WEAVE AND COO

Being a Sexual Object Is for Birds, Men Find

GREENACRES, Wash. (P)—As sex objects, Robert Young and Lester Boyd are for the birds.

They bob, they weave, they .coo senuous mating calls and perform food exchange rituals—all to put uptight falcons in the mood for romance.

When the two men are successful. male falcons deposit semen in a special hat with a rubber ring, and female falcons submit to artificial inse-

"The birds can be very finicky when it comes time to mate," said Young, a physician in this Spokane suburb. "There's a number of courtship rituals you go through, such as food exchange. Eventually, the bird looks upon the human as a sexual ob-

Young and Boyd, a Washington State University zoology technician at Pullman, are experienced falconers' hunters who use birds of prey in catching animals.

They began using their complex breeding method, called "cooperative artificial insemination," three years ago as a way to increase their supply

The technique has produced about 20 falcons and hawks, many of them rare hybrids, the men said. Their favorite variety is the prairie falcon, which has a $2\frac{1}{2}$ -foot wingspan and is protected under federal migratory

In Pullman, Boyd begins the process with his stock of mostly male birds. Following the example of wild birds, he offers food to his falcon "mate" while bowing, posturing and warbling seductively. If the courtship ritual succeeds, the male bird hops

· onto the special hat and

The sperm stays usable to 14 hours, so Boyd Greenacres by carrier pige he uses pigeons because the able and cheap and spare

160-mile roundtrip drive.

At Greenacres, Young tal with his stock of largely fem He goes through much the s tual, and when the female is re implants the semen through a tube.

"Our interest is that it's forceful (as other methods), traumatic experience for the said Boyd. "We can get more min out of the birds."

Young's champion hen is a pr falcon which has produced 17 this year, 10 of them fertile.

Birds of prey have been prod by artificial insemination since 1940s, Young and Boyd said, but breeders use their technique.

Youth Crime Prevention

WASHINGTON (AP)—The Law forcement Assistance Administra Friday invited public and pri agencies to apply for \$10 millio federal money for programs to pr vent juvenile delinquency.

More Snow in N.Y.; Cold Records Fall

From United Press International

fell Friday on Buffalo, N.Y., which already snowfall it ordinarily gets for an enmere yet by the calener cold in other

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doesn't wal should simply talk regardless of what he's ask Playgirl: Do you think you dues?

Beatty: Yes, I've given up a lot for politics. I also think I'm not making an awful lot of people unhappy by not being interested in government. The political life is a life of thinking that you're doing something for people. So you do it, and you give yourself to it, and you really give things up, and afterwards people say, "How could you have been such a shit?"

Next month Claudia Dreifus interviews international journalist, Oriana Fallaci. Ms. Fallaci's most celebrated political interviews include Henry Kissinger and the Shah of Iran. turkey ped up